

OPIUM SMOKING

AND

OPIUM EATING,

THEIR TREATMENT AND CURE,

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P R E F A C E .

The nucleus of the following treatise was an Essay by the Author on "The Medical means of counter-acting the effects of Opium-smoking in China, with suggestions as to the best method of conducting Opium refuges," to which a prize of £50 was awarded in February, 1881, by Sir James Risdon Bennett, Sir Joseph Fryrer, Dr. Sieveking, and Dr. Broadbent, adjudicators.

Besides enjoying the advantage of actual Hospital work among the Chinese, the Author has consulted almost every available work that has yet appeared on the subject.

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INTRODUCTORY.

The Political Aspect of the Opium Trade with China.

It does not fall within the province of this treatise to speak at all on the political aspects of the opium traffic; nor of the possibility that this great country may, some day, see her way to reverse the policy she has pursued for a century past of fostering the trade in opium, and even forcing a contraband and ensnaring poison on the markets of a weak and unwilling nation. What amends she may make by prohibiting the growth and preparation of the drug in her Indian possessions* when the national con-

* "The plan adopted by the Indian Government *makes it the purveyor of opium for the Chinese market.* Our legislation in regard to alcoholic beverages in England, is a legislation of repression. In Bengal, on the other hand, for the sake of increasing our revenue, we become *the cultivators of opium and its manufacturers* into a form suited for the Chinese market. The point I wish to urge is that the amount of vice and immorality produced by opium is so great, that it becomes a civilised and christian nation to make every effort to stay this fearful evil." Paper read before the Social Science Association at Brighton, October, 1885, by R. A. Fowler, Esq., M.A., F.R.C.S. The resolution passed at the last meeting of the Anglo-Oriental Society, in Exeter Hall, for the Suppression of the Opium Trade, is to the same effect. "That having regard to the great and increasing evils attending the course pursued by the Indian Government in *the production and sale of opium*—as inflicting, for the sake of revenue, grievous wrongs on China and British Burmah: as producing in the Chinese Government and people a spirit of resentment, and thereby

science is awakened to the obligation of removing a stumbling-block and a snare out of a brother's path, we know not, though the history of the abolition of the British slave trade and the 20 years' agitation that preceded this grand triumph of the christianized conscience of the nation should not leave us without hope. The trouble is that no amends can be made such as shall restore the Chinese people to the proud position they once enjoyed—a condition of simplicity, sobriety, and moderation exceptional amongst the nations before the national life and manners were sullied and vitiated by an enervating and degrading vice. The trouble is that the habit of opium-smoking has grown with the years, has become so engrafted on the people, is so generally practised, and is so germane to the genius of the nation, that, partly as a measure of self-protection, to retain capital within the country otherwise wasted on the foreign article, partly to meet the vast and increasing demand for the drug, they now themselves cultivate the poppy over a vast area of territory, materially limiting the general food supply throughout the country, and some seasons leading to a positive dearth. Dr. Collins, of Peking, says, "No estimate that I have seen can be regarded as an over-statement. There is an opium shop in every village, and there are opium smokers everywhere you travel. Compradors in foreign honges have the

interfering with the success of the Christian Missions, and in every way injurious to Great Britain in the eyes of the world—the assembly desires to renew its condemnation of that course, and to express its earnest hope that our Government will not delay longer in doing justice to China, by ratifying the opium clauses of the Chefoo convention negotiated four years ago."

opium pipe in readiness, and offer it as freely to their customers as we would a pinch of snuff or a cigar." This statement completely tallies with my experience during my 6½ years' residence in Hankow and Kewkiang. Pere David, the famous Jesuit Missionary and naturalist, told me that the most fertile provinces, such as Szechuen and Shansi, once famous for their cereal and rice crops, as well as tea and silk, are given over to the growth of the poppy—have, in fact, become converted into one great poppy garden, white with blossom in spring-time—a hazardous and precarious crop. According to Dr. Porter Smith, about one-half of the arable land in the province of Szechuen is devoted to the growth of the poppy, and 7-10ths of the townspeople are opium-smokers!*

* I can put no manner of confidence in the attempts made to fix the *precise proportion* of opium-smokers to the population, though the general conclusion is only too manifest, viz., that the habit is *very general, that it is still extending*, and that it is no longer confined to adult males, but is *practised also by women and children*. Rev. Dr. Edkins says 55 per cent. of the men smoke in Shanghai; 15 per cent. in Shantung; none in some of the villages. Dr. Dudgeon estimates the number of smokers at 30 or 40 per cent. of the male population of the country; but of the city population 40 to 60 per cent. Yet of agriculturists and field labourers only 4 to 6 per cent. The Rev. C. H. du Boze, resident Missionary in Suchow, the capital of the province of Kiangsu, says, 7-10ths of the adult males, in this place, smoke opium, to which fact all the natives will attest. In Tai-Yuen, the capital of province of Shansi, it is estimated that 6 or 7 out of every 10 men you meet are addicted to the habit, and a *large proportion of women*. In Ningpo there are 2,700 opium-shops to 400,000 inhabitants, or a shop for every 148 inhabitants, or every 30 men (Maunders' "Our Opium Trade with China.") A writer in the *Chinese Repository* of 10 years ago, says there may be *three or four millions* of opium smokers, or 1 per cent. of the population, with which some statements of Sir R. Alcock

Opium is certainly now the staple production of Szechuen, formerly the garden of China, and the Western Provinces obtain their supplies chiefly from it. Hence at Hankow, the great emporium for imported goods for Central China, the imports of foreign opium are small. Sir R. Alcock, in his report for the year 1869, says: "About 2-3rds of the province of Szechuen and 1-3rd of Yunnan are devoted to opium." In Shantung and Honan, where the poppy and the millet are grown in about *equal proportions*, the children have a rhyming proverb, which runs thus:—

"Everywhere the flower blows,
Sleeping, waking, still it grows;
Reap the profit while 'tis there,
For the future who shall care!"

Poppy Culture a Cause of Dearth of Food.

It is a serious question how far the displacement

agree; but, on summing up the evidence to the present date, Rev. David Hill, of Wuchang, asserts there cannot be less than 15 or 20 per cent. of the city population, or some *tens of millions* of slaves to the opium pipe. Mr. Frank Trench, agent of the British and Foreign Bible Society, travelling last summer in the most distant provinces of Kwei-chau and Yuunan, brings the same story of the *prevalent growth of opium*, to the utter exclusion of less remunerative crops, "poppy everywhere around us." At Kwang-tsze-Yaon, "all nearly smoke opium, which perhaps accounts for the great poverty." Every village has its victims, nay, in many, we are told, "men, women, and children, all smoke." At Mo-lung-choh opium "freely smoked by men and lads." At Yang-lin "opium smoked in nearly every house." *Thirty years ago* the poppy-plant was unknown in this province, and now 7 out of every 10 persons you meet are slaves to the opium pipe! Dr. Kane estimates the number of opium smokers in China at 15,000,000.

of the cereal and rice crops by the culture of the poppy, together with the impoverishing habit of opium smoking, are not directly responsible for the periodically-recurring famines and terrible waste of human lives occurring in remote and inaccessible provinces of India and China.

To the growth and development of the habit of opium-smoking in China, history affords no parallel. Opium was all but unknown to the ancient people of China.*

The Chinese name for the drug 鴉片 "Ah-pien" is clearly of foreign origin, and is believed to be a corruption of the Greek word *ὀπός*, "juice"—poppy-juice—the juice par excellence. It occurs in the *Pun Tsáo*, and, according to Dr. Dudgeon, is traceable to the reign of Wan-lieh (1596). There is a description of the poppy-plant, and an imperfect account of the mode of collecting the juice. Dr. Dudgeon accordingly maintains that opium was known in China before the Portuguese and the East India Company commenced the traffic.

* The strongest proof that opium, if known, was at any rate not produced in any quantity in China until the present century, is inferred from the fact that there is hardly more than a single notice of the drug in the native medical books. In the year 1834, Heu-Nai-Tsze, Salt Commissioner at Canton, addressed a memorial to the Emperor on the subject, and speaks of three kinds of opium. "One," says he, "is called Company's, the outer covering of which is black, hence it is called 'black earth;' it comes from Bengal. A second kind is called 'white skin;' it comes from Bombay. The third is called 'red skin,' and comes from Madras. These places all belong to England."

Opium all but Unknown to the Ancient People of China.

It dates in any serious dimensions no farther back than the present century. Introduced, as it probably was, from India and Turkey (where the drug is used both as a masticatory and in smoking) any time during the last 200 years, the consumption of opium up to the end of last century was still small, and the trade a legalised branch of traffic, being mostly employed in medicine. In the year 1767 the quantity imported from India did not exceed 200 chests ;*

Early History of Opium and Opium Smoking.

* It has been recently discovered by Dr. Edkins that the first imperial edict against the import of opium and the practice of opium smoking was issued in 1728, in the seventh year of the reign of Yung-Chang, a circumstance which completely exonerates the British nation from the charge of originally introducing the opium-vice into China. The Ying-su-hwa mentioned by the poet Su-che, A.D. 1100, it is contended by Dr. Edkins is in all probability the opium poppy, and its sedative properties as a medicinal potion were probably understood in that remote age. Dr. Dudgeon says there is evidence that the vice of opium smoking existed in Formosa and Amoy during the latter part of Kanghi's reign (1622-1722); and Dr. Edkins says opium was used by the people of Java, mixed with tobacco, in 1690 and earlier. The presumptions, therefore, are that the Chinese have been dallying with the opium-pipe for about a couple of centuries, and that the enormous extension of the practice, and the production of the drug, are matters of the present century. Still later, Dr. Edkins tells us that Persian opium and the opium poppy were introduced into China by the Arabs, about A.D. 1488, but at this time "smoking was not thought of, and the juice of the poppy was used only in the form of a decoction, or in any other way prescribed by a physician." In the middle of the 16th century, the Portuguese brought opium to Canton and Amoy. "In a document inserted in the Chinese history of Formosa, it is said that about the year A.D. 1720, or perhaps a few years sooner, the native islanders taught the Chinese colonists to smoke opium

in 1796 it approached 4,000 chests. In 1839, the year immediately preceding the first opium war, 35,000

in order to win their money from them. Young men of reckless habits met at night in opium-smoking houses—a feast was prepared of fruit and pastry. New visitors at these gatherings were not asked to pay a share. After a time they would not be able to stay away, and would ruin themselves in order to come. They passed the whole night without sleeping, given up to vicious indulgence. If they remained a day without smoking their cheeks shrivelled, their lips fell apart, their animation was gone, and they had no heart for anything. But if they smoked again they were well. After three years they died. Such is the earliest account known to exist in any book of the commencement of opium smoking in China.”

“The native growth in Yunnan can be traced to about the same time, or a little later. In the history of that province, published in 1736, it is stated that opium was then a common product of the department of Yung Chang-fu in that province. This native opium would be intended not for opium smoking, but to be used medically.” Dr. Edkins has completely dispelled the vague, unfounded assertions about the immemorial antiquity of opium smoking, and has confirmed all that has been advanced by the Anti-Opium Society. The first British importers of opium did not teach the vice to the Chinese; possibly they did not even know that the drug was used in vicious indulgence. But when the vice had spread to such an extent as to be generally reprobated, and the import of the drug was forbidden by the Government, they continued to bring it, in violation of Chinese law. This was their crime. Dr. Edkins thus describes the result: “Opium smoking has now become one of the national characteristics. It makes the people unhealthy and weak; it encourages waste, raggedness, and despair; it destroys the prospects in life of those who are young, intelligent, and vigorous; it causes the rich to become poor, and changes the poor into beggars. In a country so thickly populated, many have a hard struggle to live; but with the spread of the habit of opium-smoking the class of the very poor is greatly increased. The land is filled with wretched-looking physiognomies, and the most tattered of costumes.”

chests were imported. It has now, in the year 1875, reached the enormous quantity of 88,401 chests, yielding a revenue to the British Government, from the taxes levied on the drug, of something like seven millions sterling!

The whole value of their two most precious native industries bartered for the "foreign dirt!"

The total value of all the tea and silk exported from China in the year 1867, according to Edkins, amounted to Taels 49,478,389, and the total value of the opium imported from India the same year amounted to Taels 45,071,357!

Opium Smoking, in its extent and ravages, comparable with the vice of Intemperance, though the growth of but two centuries.

Intemperance, the widespread and besetting sin of the British race, slays its thousands and ruins myriads more. Opium smoking is equally responsible for an unknown but vast multitude of shortened lives, with untold incidental loss and misery to the people of China! What shall we think of a national vice comparable in any degree in its destructive influences with the vice of intemperance, growing up to its present vast proportions almost within the memory of living men? Give it time, and it bids fair to outdo alcohol in the race of destruction, and carry off the palm as the most fatal of all stimulants to the happiness and well-being of the human race!

We have done much evil to China by developing a taste for opium; an evil which it is impossible to

repair; but something might be done to the cause of religion and humanity if England could be induced to withdraw from the growth, manufacture, and sale of the drug. The acquisition of a taste for this baneful stimulant would in that case be limited or removed, so far as our Indian and Burmese fellow-subjects are concerned, and the strongest possible assurance be given that, as a nation, we sincerely sympathise with, and are ready to co-operate with, the Chinese authorities in their efforts at repression. It would surely not be too much to expect a Christian nation like the English, proud of her name and honour, foremost among the nations in position and influence, glorying in her traditions—chosen of God, as one of her noblest sons fondly believed, “to be his second Israel, that she might teach the nations how to live”—it would not, we say, after all, be too much to expect of England that she should set the nations the bright example of *non-complicity in this nefarious traffic* by absolutely withdrawing from the monopoly, and prohibiting the culture of opium in India. The increasing prevalence of this habit, the enormous expense it entails upon the people, the dreadful suffering it inflicts on its victims, the poverty and wretchedness and social disorganisation which follow in its train, should excite the sympathy of all men. The medical men throughout China, whom I have freely quoted, and who, with others in different spheres of life, speak from personal knowledge, are loudest in pronouncing it a terrible evil, and one against which all the friends of humanity should wage a war of extermination. “I cannot,” says Sir Benjamin Brodie, “but regard those who promote the use of opium as an article of luxury as inflicting a most serious injury upon the human race.”

Opium and its Constituent Principles.

Opium from different countries (Asia-Minor, Persia, India, China, Egypt, France, America) varies much in the proportion of its ingredients, apparently due to peculiarities of sun, soil, and climate. Thus French opium is remarkable for its richness in morphine (14·50—22·80 per cent.); as also that of Asia-Minor (14·78 per cent.); American (15·75 per cent.); Persian (10·8—13·47 per cent.); Egyptian (5·8 per cent.). East Indian opium stands the *lowest in the scale* as regards the per centage of morphine (2·48—3·21 per cent.).—*Flückiger and Hanbury.*

This makes little difference, however, to the Chinese, who select opium, not for its strength, but for its flavour, &c. Indian opium is noticeable for containing a large proportion of *narcotine* (7·7 per cent.). Opium grown in China contains a somewhat larger per centage of morphine (5·9 per cent.) than the Indian, and about the same amount of narcotine (7·5 per cent.). The poppy is now grown in the Yunnan, Szechen, and Kweichow provinces, the annual opium yield being 41,000 peculs, or 5,466,666 pounds. The amount imported from British India in the same year (1872) was 12,000,000 pounds.

Method of making "Smoking" Opium.

The process of preparing the crude gum for smoking is by boiling in water, repeated filtration, and evaporation over a slow fire, to the consistence of molasses—in short, making an *inspissated watery extract*, which involves a loss of one-half the gum opium by weight.

The mode of smoking is to take up a portion of

the treacle-like mass on the point of a needle, to heat it through and through over the flame of a small oil lamp, so that it bubbles and swells up to seven or eight times its original bulk, to keep rolling and warming it alternately over the bowl of the pipe until it is formed into a pea-shaped pellet, which is thrust down with the needle to the bottom of the bowl, when the latter is inverted till the flame strikes the opium. The operator then inhales strongly and steadily the smoke of the burning drug, which passes into his lungs, and is returned through the nose—never through the eyes or ears. The smoke is heavy, white, with a not unpleasant fruity odour. Having finished this bolus, which requires but one long or a few short inspirations, the smoker cools the bowl of the pipe with a sponge, and repeats the operation as often as is necessary to obtain the desired effect. Smokers are classed into “long-draw” and “short-draw” men, according as they consume the pill in one or several inhalations. The long draw is undoubtedly the most influential and injurious. “Cooking” the mass and inhaling it are both processes which require some skill and practice to acquire. Women never make good smokers.

Horace Day arranges the constituents of opium under three heads:—(1) Those that are *merely acrid*, porphyroxin, narcein, papaverin, meconin; (2) *Paramorphia* or thebain, a *convulsive agent*, allied to strychnia and brucia, a dose of one grain being capable of inducing tetanic spasms, through its influence on the spinal cord; an effect totally distinct and antagonistic to that of (Class 3) the remaining five substances, which act upon the brain in the following ascending order of nervine power: narcotin, codein,

opianin, metamorphia, and morphia. Narcotin is an antiperiodic, like quinine, and a mild narcotic poison. Morphia, metamorphia, and opianin closely approximate in their effects, the degree of *soporific and sedative* power being in the order named, while codeia is only one-fifth as powerful as morphia.

Preliminary Questions to be settled: First, is the use of Opium as deleterious as it is represented to be?

The somewhat controverted, and one may even say still *open* question of the pernicious effects of opium smoking and opium-eating* claims a preliminary investigation in an essay on this subject.

The use of Opium on the increase in England and America.

* The opium question has been hitherto too much looked upon as a matter which concerned the Chinese only; but it will be seen from what follows that in England, and still more in America, the practise of taking opium in some form *as a narcotic stimulant* is alarmingly on the increase. The workpeople in Manchester are rapidly getting into the practice of opium eating, so much so that on Saturday afternoons the druggists' counters are strewed with pills of one, two, and three grains, in preparation for the known demand of the evening. The immediate occasion is said to be the lowness of wages, as a cheap substitute for alcohol (De Quincey); or rather as a food substitute (?), with a view to removing the traces of disease and depression (Anstie). The results of my own inquiries are to the effect that in all the cotton-spinning towns where female labour is in requisition and well paid, laudanum is more or less in use. Children are accustomed to it from their earliest infancy, the parents drugging them with daily potions of Godfrey's Cordial, Dalby's Carminative, soothing syrup, or laudanum itself, during the long hours of their absence from home. Dr. Bridges, of Bradford, attributes the excessively high infantile mortality of that town to the frequent administration of laudanum to very young children.

We may say, at the outset, that it is hardly to be wondered at that a drug, the bare enumeration of

Dr. Ringer, in his "Handbook of Therapeutics," says the use of opium and laudanum is practised in many localities in England to a startling extent. My brother Professor Shearer, of Airdale College, Bradford, says that during some years' residence in Cambridgeshire the amount of opium dispensed over the druggists' counters on a Saturday night, *mostly to women*, was a subject of common remark among the country people. It amounted to some pounds weight weekly, in the form of pills and powders. Systematic drainage has for more than a century past practically banished *fever and ague* from the fenny districts of the Eastern Counties; they are still, however, liable to inundations and accumulations of stagnant water in very wet seasons, hence rheumatism, neuralgia, and similar affections are common, resulting from a mild diluted form of the marsh poison, for which, probably, opium is resorted to. In "Alton Locke," Charles Kingsley relates the impression of the country people in the Fen country to be such, that without fermented liquors or opium they would die of cold and ague. "You goo into druggists' shops o' market day, into Cambridge, and you'll see the little boxes, dozens and dozens, a' ready on the counter: and never a ven-man's wife goo by, but what calls in for her *pennord o' elevation*, to last her out the week. Oh! oh! oh! Well, it keeps women-folk quiet, it do; and it's mortal good agin ago pains." Dr. Headland says, if the testimony of various medical men and drug-dealers can be depended on, there is no escape from the melancholy conclusion that the pernicious custom of opium-eating is extending among the lower classes. Driven to it in time of want, to allay the cravings of hunger, or drown the gnawing sensations produced by enforced abstinence from spirituous liquors, or impelled by a belief that it strengthens the frame against the influence of a damp and unwholesome climate, the operative in the manufacturing districts, and the field labourer in Lincolnshire resorts once to opium, and is thenceforth *riveted for life* to the fascinating but baleful drug. H. Moses, Esq., M.D., author of a work entitled "An Englishman's Life in India," says the practice of taking opium, laudanum, ether, and morphia is increasing to a frightful extent amongst the population

whose virtues as a panacea for the chief ills of human kind, and the greatest of all anodynes for human

of the Fen distriets in Cambridgeshire and Lineolnshire. It may be safely averred that every second customer who visits the druggist's shop purchases an opiate. A daily "sixpennyworth of poison" is a common allowance, and we have heard of families where the yearly bill for opium and laudanum amounted to £20. In the town of Wisbeach alone eight gallons of laudanum are sold weekly! Dr. Seoresby Jackson says the praetice of opium eating in one form or other is carried on to a deplorable extent. Dr. Fleming, of Birmingham, thinks there is good reason to believe that the habit of opium eating has, of late years, become very prevalent in England, more espeecially among the labouring elasses. Faetory hands use it as a "soothing stimulant" when fagged and worn out with the monotony and drudgery of their daily work, and the people in the Fen country take it *to lay the ague and the tic*.

Mr. Hawkins states, in the *Pharmaceutical Journal* for February, 1868 (quoted in "Zeimssen's Cyelopedia," Art. Opium, by Boeek), that opium eating is constantly on the increase in the so-called manufacturing distriets of England, and in the counties of Lineolnshire, Cambridgeshire, and Norfolk. In these distriets an apotheeary sold in one year 200, another 140 pounds of opium!

The *Baltimore Gazette* says, "Opium eating has had an alarming growth in this city, and the number of those who habitually use the drug is daily increasing, while all agree that the drunkard is blessed in comparison with the opium eater."

The *San Francisco Evening Post* says, "The vice of opium eating is indulged in by professional and literary men, by students in our colleges and pupils in our higher schools, by people who suffer from nervous disorders, fast women, and those whose business or vices make speeial demands upon the nervous system. The vietims of the drug in the United States have been estimated at 120,000, without counting the Chinese themselves, who are inveterate slaves to the habit."

suffering, should come to be in demand during other than the critical periods of sickness and disease, as

Dr. Earle, Physician to the Washington Home, Chicago, has noticed a rapid increase in the numbers of cases admitted for cure of the opium-habit. Fifty druggists in the States had five opium customers each. Of 235 habitual opium eaters, 169 were females, or 3 to 1 (being the reverse of what holds true in China), and one-third of the women were of the profligate class. The vice is largely one of middle-life, the larger number of victims being between 30 and 40 years of age. But one lady at 50 had taken the drug since she was 13; another at 65 was taking 3j. of gum-opium daily; an aged couple, Aet. respectively 70 and 75, took 3j. of morphia weekly when they could get it. Most morphia takers either are, or have been, married, and many are separated from husband or wife. Various reasons are given for taking the drug, as, for example, its stimulative and happy effect, previous addiction to drink, unhappy marriage, rheumatism, neuralgia, female complaints, previous sickness, wounds received during the war, loss of property, and so on. But the great majority confess it was prescribed during some disease in which pain was a prominent symptom. A large number of ladies take from a third of a grain to a grain of morphia daily. Some take a dose two or three times a day, others a large dose at night only. Some of the oldest opium eaters take a large dose only at intervals of one, two, or three days.

Dr. Day says the habit is gaining fearful ground among professional men, the operatives in our mills, our weary sewing-men, our fagged clerks, our disappointed wives, our former liquor-drunkards and day labourers, who a generation ago, took gin. All our classes, from the highest to the lowest, are yearly increasing their consumption of the drug. Dr. Kane says the practice of opium smoking, comparatively unknown among us six years ago, is now indulged in by 6,000 of our countrymen; that our large cities abound in places where the drug is smoked, and that in some of our States it has been found necessary to enact laws imposing money penalties and imprisonment upon the seller and the smoker.

a refuge from care, an antidote to grief, a relief from ennui.*

* Dr. Kane, in his recent work on Opium Smoking, says :—

“Did no ill effects, physical or mental, follow the prolonged or excessive use of the pipe, or did the pleasurable sensations always come with the smoking, we could find in it a happiness and a freedom from care that nothing else could give. Evil effects do follow, however, and that pleasant state of dreamy wakefulness fails, after a time, to respond, although large amounts are smoked. It may last a year, in rare cases two years, but more often *only a few months*. Then the good spirit of the pipe disappears, giving place to a demon who binds his victim hand and foot. Smoking no longer gives the pleasure of the first few months, and the victim to the habit continues not for the pleasure obtained from it, but driven to it by the terrible suffering that surely comes if the pipe is not smoked at the accustomed time. The pipe habit resembles the other forms of the opium habit in that :—

“1^o. A gradual rise in the amount used is necessary in order to get the desired effect.

“2^o. The pleasurable symptoms that at first appear soon disappear.

“3^o. The evil effects on mind and body are alike in many respects.

“And 4^o. The symptoms incident to abstinence are the same.

“Smokers generally do not seem to know that, like other forms of the opium habit, a single indulgence after a cure will, in nine cases out of ten, cause a relapse. As compared with other ways of using the drug habitually, there is no question in my mind but that in smoking (1) it takes longer to form a real habit, (2) it works less physical and mental injury when once found, and (3) it is much easier to cure. Financially, the habit has but one tendency, viz., ruin ; and upon the morals the pipe habit exercises a strong debasing influence. Female smokers, if not already lost in point of virtue, soon become so.”

*Opium by far the most valuable Medicine in the
Materia Medica.*

Opium, "the juice" *par excellence*, still maintains its pre-eminence. Pereira says, it is undoubtedly the most important and valuable remedy of the whole materia medica. Notwithstanding the discovery of other anodynes, opium has been, from the days of Hippocrates to our own, and continues to be, the physician's invaluable ally in his struggles against disease and death.

A Résumé of its more important Applications.

In inflammatory affections of the serous membrane it holds a first place; in fevers tending to produce death by asthenia; in painful spasmodic affections such as colic, colica pictonum, cramp, angina pectoris, spasmodic asthma, hepatic colic, and the passage of gall-stones, it is a sovereign remedy. In simple or cancerous ulceration of the stomach, in dyspepsia, gastritis, gastrodynia, nervous or sympathetic vomiting, diarrhœa, dysentery, strangulated hernia, visceral obstruction, it is given with the best results, as also in cystitis, gravel, stricture, menorrhagia, dysmenorrhœa, abortion, tetanus, acute rheumatism, and pulmonary hæmorrhage. In cases of insomnia depending on physical pain, opium is our remedy. In delirium tremens and the delirium of typhus, morphia-injections often induce sleep where chloral and the bromides fail. In melancholia it frequently brings about a wonderful transformation to happiness and serenity of mind, "knitting up the ravelled sleeve of care" in balmy sleep; indeed, the experience of Dr. Crichton Browne, and that of most alienists, is to the effect that for calmative power, opium stands *supreme* above every other narcotic and

sedative. In that most agonising of all affections of the nervous system—neuralgia of the cerebral lobes—threatening, as might seem, brain fever, sleep and recovery of function are promptly induced by the hypodermic injection of morphia. Cases of alarming hiccough, otherwise intractable, yield to the same method. Opium, locally applied, best relieves the bodily distress attendant upon disorders of the rectum. Chronic and sloughing phagedenic ulcers and the most rebellious forms of syphilitic ulceration will sometimes heal rapidly under the use of opiates, after obstinately resisting all other treatment. No medical agent has the same power of controlling the formidable disease, *diabetes*, like opium, and Pavy has given more than one example of distinct and perfect cure by means of it.

In sclerotitis and iritis repeated minute doses of morphia will often suffice to arrest the inflammatory action, the photophobia, and the suffering. In Pericarditis, pleuritis, and peritonitis, if given early enough, it prevents the effusion of lymph; in phlegmasia dolens, it prevents the obstruction of the veins by clots.

The most important Anti-Inflammatory Remedy known !

“Opium is, in fact, the most important *Anti-inflammatory* remedy at present known.” (Dr. Saml. Wilks). “It never could have maintained its position as a remedy in all forms of inflammation, unless this had been its true nature. Its effects are most striking. How a peritonitis or a pleurisy is subdued, how a sore throat or a bad cold (of far less consequence to the patient, but not less instructive to the physiologist) can be at once checked by means of a Dover’s powder, or a dose of laudanum, is in every

one's experience." What is the rationale of the process? Professor Stillé says that opium in inflammations acts like rest to a fractured limb, removing or holding in check causes of irritation, and thus allows the recuperative powers of the inflamed part to act without hindrance. Most inflammatory affections date their commencement from an impression of one kind or another made on the nervous system, and reflected on the suffering organ, as when a chill precedes a pneumonic or rheumatic attack, or when an agonising wrench is followed by synovial inflammation of the knee-joint, and the good effect of an opiate is explained by its power of allaying the increased susceptibility of the nervous system, and so preventing reaction. An inhibitory effect, through the vaso-motor nerves, is exercised upon the circulation of the imperilled organ through the quieting influence of the opium upon the central nervous system and the general circulation. "Morphia," says Boeck, "exercises *first a constricting*, then a dilating influence on the vessels, through the vaso-motor nerves, which are primarily excited, and subsequently paralysed at their centres." Owing to the vaso-motor contraction of the vessels, the blood-pressure at first *rises*: after a time it becomes *sub-normal*, a natural result of the dilatation of the vessels, and the diminution of cardiac force. (Gscheidlen.)

*Classification of its greater Physiological and
Therapeutic actions.*

The great medicinal actions of opium are arranged under the four following heads by Dr. Headland:—

1st. It removes pain, acting as a *sedative* to the nerves of sensation.

2nd. It counteracts morbid wakefulness, acting as a *soporific*.

3rd. It controls nervous excitability (*Calmative*).

4th. It controls muscular spasms by its relaxing effect on the general muscular system (*Antispasmodic*).

To these, however, may be added:—

5th. Its power of controlling or averting threatened inflammation (Antiphlogistic or anti-inflammatory); and

6th. According to Dr. Anstie: its probable action as a “food stimulant,” or food substitute, as I should rather express it.

Example of its Subjective Effects.

The following may be taken as a fairly typical illustration of *the subjective effects* of opium and morphia in a very common disorder—acute rheumatic fever with much suffering. Even in the worst accessions a half-drachm dose of solution of morphia relieves all painful sensations and spreads an agreeable calm over the mind, tranquillises the feelings and renders one, heretofore ever so cross and peevish, amiable and contented. The inhalation of chloroform has a similar effect. It may last for hours, possibly all night, but morning brings with it headache, depressed or glumpy feelings, a dry tongue, a disagreeable taste in the mouth, and disinclination for food, if not actual dyspeptic symptoms. So prompt and effectual is the relief at the time, and so agreeable the reverie in which it enables one to indulge, that few people who have once experienced its soothing power, would be deterred from the habitual use of the drug, but for its *unpleasant after effects*. These become increasingly serious *in the long run*, as the drug is more and more largely and continuously used (though in the majority of cases the sickness, dyspepsia, and constipation originally

experienced pass away), of which the main features are loss of spirits, and loss of flesh, colour and tone in the system. Dr. Aldridge, who cured himself of a sharp attack of rheumatic fever, by means of large and repeated doses of opium, confesses to the *subtle charm* of the "grief-assuaging remedy" prompting to the *use of the remedy long after* his disease was cured!

"The first effect," says Dr. Kane, "in his experiments with the opium-pipe on himself and other healthy subjects, was nausea and dizziness, accompanied by a pleasant sense of exhilaration and quiet, easy contentment. There was an increase in the force and frequency of the pulse, hot flushes over the body and face. After a few more pipes came a soft pulse, lessened in frequency, a fall in temperature, then profuse perspiration, ringing in the ears, and intense itching of the nose, eyelids, face, scrotum, and back. (I have seen the most intolerable urticaria appear after every dose of morphia in some cases of rheumatic fever, so bad that the remedy was declared to be far worse than the disease.) Dizziness of the mind, sleepiness and dread were then experienced, momentary unconsciousness, and a sudden clear awakening. The following is typical of many experiments:—

	Pulse.	Temp.	Respn.	Sphygmogram.
Before smoking	80	98·5	22	
1st Stage. (Exhilaration)..... }	110	98·8	22	{ Rise in tension; sharp, long up- stroke.
2nd Stage. (Commencing nausea and perspiration) }	118	99·5	20	{ Blunting of end of up-stroke: tension stationary.
3rd Stage. (Sleepiness: nausea: itching) }	70·58	90	14	{ Up-stroke again high and sharp: hyper-dicrotism.

The pulse indicated nervousness and exhaustion for the following twenty-four hours. Urine pale, Sp. gr. 1010, reaction neutral and highly phosphatic, and containing a trace of morphia. Furthermore, the sleep following the smoking was calm and perfectly free from dreams, while that following the taking of morphia was filled with horrible phantasmagoria. Old smokers do not, as is generally believed, smoke their few pipesful and then fall backward into a heavy sleep, peopled by fantastic dreams. They smoke not for the sake of sleep, but for a condition of *dreamy wakefulness*, a pleasant, listless calm and contentment with themselves and all the world. A state of drowsiness and dozing rather than sleep is the rule, not incompatible with conversation. The majority of old smokers complain that they sleep very little, and that their indulgence causes them a distressing insomnia.

In the words of De Quincy, and the bare enumeration of its chief applications above given, justifies the language:—"Opium, if not the sole, is at any rate the chief catholic anodyne hitherto revealed to man: the mightiest in its command over pain: the most potent of all agents to sustain the drooping animal energies under any call for extraordinary exertion as in the case of fatigue and after formidable operations." Every considerable operation, as remarked by Dr. Young, of Edinburgh, in his treatise on opium, is apt to raise a tumult of the nerves, and even to induce convulsions in timorous, delicate persons, but a dose of opium taken a couple of hours beforehand, gives courage and steadiness both to the body and the mind, and obviates these grave inconveniences. "The powers of opium as an anodyne, its revolutionary magic transforming agony to ease

and pain to pleasure, might well," says De Quincey, "in pagan lands cause altars to be erected, and priests consecrated to its benign and tutelary powers," and we hardly need wonder if men sought to find in it yet other benison—a counter-agent in short against *nervous irritation* (which he has pronounced "the secret desolator of human life"), and the formidable curse of *tedium vitæ*.

Its perversion as an agent of Sensual Pleasure probably originated with the Mohammedans.

When and where the perversion of its use from a beneficent medicinal agent to an instrument of sensual pleasure first began, cannot be decided. It has been conjectured, with much show of probability, that the prohibition of wine and fermented liquors to the followers of the false prophet, encouraged the secret use and insidious advances of the gentler and more enslaving stimulant.* It certainly seems to have reached India and China with the spread of Islamism, and the custom is not perhaps to be wondered at in a people with whose religious creed ideas of sensuality are closely interwoven, and which teaches its votaries to degrade the conception of Paradise itself into a prospect of boundless, unbridled licentiousness.†

* The introduction of opium into India, is thought by Flückiger and Hanbury to have been connected with the spread of Islamism, and may have been favoured by the Mahomedan prohibition of wine. The earliest mention of it in that country is made by Barbosa, who visited Calicut on the Malabar coast in 1511.

† "The poppy and its produce were unknown to the Hindoos till a comparatively recent period. It has been conjectured to have been introduced into India and China by Mahomedan

The drug is not equally acceptable to all races and all constitutions.* In Turkey and Persia it has had numerous votaries, but the custom is said to be on the decline, owing to a growing freedom in the use of wine! Rev. F. S. Turner, B.A., says, "it is but sparingly consumed in India,† the great source of

traders, probably in the 9th or 10th century. If such be really the case, the disciples of the Arabian prophet will not only be entitled to the credit (whatever it be) of having introduced the art of *distillation and the use of ardent spirits* to the Western world, but also of having introduced its favourite luxury (opium) into the East. At all events it is certain that opium had been introduced into China in the early part of the 16th century: a century and a half before the English had anything to do with its cultivation."—*Crauford*.

* "Different races seem differently affected by its use. It seldom, perhaps never, intoxicates the European; it seems habitually to intoxicate the Oriental."—*Horace Day*.

"There are two classes of temperaments as to this terrific drug—those whose nervous sensibilities vibrate profoundly under the first touch of the angelic poison, and who experience neither sickness nor nausea from its use: and those who are disgusted with the initial use of the drug, even to the extent of retching and vomiting, and who, as an after-effect, suffer the greatest depression of spirits."—*Idem*.

For persons of the poetic temperament, sociable and gifted in conversation, capable of high-wrought sensibility, the fascinations of wine and opium are doubly perilous. Having tasted of the enchantment which these can temporarily bestow, and "wanting better bread than can be made from wheat," they recur again and again to this forbidden and false source of inspiration which is nothing in short but a cowardly submission of the spirit to be ruled by the flesh.

† If one may judge from the few specimens one meets with, *the Indian Ayahs* are commonly *opium smokers*, and it works in them the same evil results observed in China: slovenliness and laziness, and neglect of the most obvious duties of their position, hours of recumbency and somnolence at the most unseasonable times, and general untrustworthiness.

supply," but Dr. Moses, already quoted, says, "this fearful species of intoxication, by means of opium, is more generally practised among the inhabitants of British India than is commonly supposed. The Mohammedans in particular are much addicted to its use: and much of the apathy and indifference observable in the native character may be attributed to this universal evil, which would seem to be daily gaining ground among them." It is in China, however, that the habit of using opium as a luxury and pleasurable stimulant has taken the firmest root and produced the gravest consequences.

An honest investigation of the whole question demanded.

In endeavouring to estimate the influence of opium on the constitution, it is necessary that the mode of using the drug should be taken into account, and that all the arguments advanced in favour or extenuation of the practice should be duly and honestly weighed. The principal of these are to be found in the "Confessions of an English opium-eater," and must be considered in the first place. Not that the work is regarded as of much scientific value; it is rather the artistic production of a brilliant litterateur, an *apologia pro vita sua*, an elaborate essay to white-wash his reputation and offer excuse to the world for the weakly self-indulgent habit of his life. The impression conveyed by no inconsiderable portion of the book is, that he takes the part of champion and advocate of his beloved narcotic. Several of the positions he assumes with respect to the effects of the drug, supported, it must be admitted, by accurate and discriminating observation, have not yet received the attention and investigation they deserve. He is the foremost exponent of opium as a pleasurable

stimulant and minister to voluptuous reveries, and asserts—

1st. *That it does not produce intoxication.* He says that whereas moderate doses of alcohol *muddify*, moderate doses of opium *clarify* the mental operations: that the pleasure given by wine is more acute, quickly mounting, evanescent; whereas that induced by opium is a chronic pleasure, less rapidly developed, but more stationary, and lasting for hours. If the Turkish or Mahratta soldier is fired to madness by his haschish, the predominant ingredient is not opium, but extract of Indian hemp. De Quincey contends that, “whereas wine disorders the mental faculties, opium, on the contrary, induces the most exquisite order and harmony amongst them: that wine robs a man of his self-possession, while opium strengthens and reinforces it: that wine unsettles the judgment, while opium communicates serenity and equipoise to all the faculties.” There is truth in this, more especially as applying to the virgin use of the drug. Dickens “held the mirror up to nature.” when he sketched the picture of Jasper the opium smoker and lay precentor in “the mystery of Edwin Drood,” who never sang better, with greater abandon and greater correctness, than after his customary pipe. Medical men settled in malarious districts abroad, know well the steadying, inspiring effect of an opiate when their services are required during an aguish attack with their nerves all unstrung.

It is Intoxicant and Narcotic.

But from personal trial and close study of the effects, I maintain that wine and opium exert, on

most people, tolerably analogous effects ;* that both temporarily give tone and stimulus to the central organ of the circulation, promoting a vigorous determination of blood to the nervous centres and a quicker flow of ideas ; that both benumb the sensibilities to outward noises and distractions, and procure relief from subjective aches and miseries, and are therefore favourable, if one is interested, to concentration of mind and literary endeavour, and if not so interested, to sleep. Taken in moderation, they both, at one and the same moment, depress certain portions of the nervous system (the sensory) and stimulate others (the ideational, or ideological), and it is admitted that the influence of opium in these respects is the more potent and lasting. Yet these finer effects are evanescent. While the glow and enthusiasm of application are upon you, you become increasingly conscious of a dulness towards the facts and movements of every-day life ; that you are less

* Coleridge speaks of it as "a subtle kind of intoxication": Blair as "a kind of dreamy exhilaration, similar in nature, but not in degree, to the drowsiness caused by wine, though not inclining one to sleep, but rather to sing or leap, or engage in some active exercise." "I could not resist," says Blair, "the temptation to break out in the wildest vagaries. A 'waking sleep' succeeded, in which magnificent halls, filled with strange gigantic figures and lighted with blazing gems, opened upon the mental eye—Titanian splendours and immensity. At midnight I was roused from my state of dreamy abstraction. On my return home, my veins seemed to 'run lightning,' and I knocked down the first watchman I met. I was sadly 'milled' on the way home, slept disturbedly, haunted by nightmare and terrific dreams, and awoke next morning with a dreadful headache, deadly sickness and aching in every joint." Compare this with Solomon's description of the effects of vinous intoxication, B.C. circ. 1000, and the parallelism will be found to be very striking. Proverbs xxiii., 29—35.

sensitive than you ought to be to "the glory of the grass, the freshness of the flowers;" you know that you are more stupid and slow to apprehend; that you are weaker in your grasp of facts, slower in repartee, more distraught in conduct, as the effect of the drug passes off. "*The consciousness, in short, is benumbed,*" to use an expressive phrase of George Elliot's in *Silas Marner*, when speaking of the miseries of the neglected wife of Godfrey Cap, who took to laudanum for comfort. A mother's love pleaded for *painful consciousness* rather than oblivion: pleaded to be left in aching weariness rather than have the encircling arms benumbed so that they could not feel the dear burden of her only child. But she yields to the craving for present relief, the emptied phial is flung behind her, and she walks onward, always more and more drowsily and clutching more and more automatically the sleeping babe to her bosom. Slowly the demon works his will, with cold and weariness for his helpers. She feels nothing but a supreme, immediate longing that curtains off all futurity—the longing to lie down and sleep. She sinks down against the nearest furze-bush, and the bed of snow is soft. She does not perceive that it is cold, nor does she heed her infant's cries. Complete torpor comes at last, the fingers lose their tension, the arm unbends, she breathes yet and yet more slowly, even as in sleep, but it is the sleep of death! Who could tell from the symptoms that George Elliot was not here writing the tragic story of some Poe's or Burns' death by alcohol?

Opium and Alcohol compared.

De Quincey says that "opium does not destroy one's self command and power of co-ordination,

whereas alcohol destroys the self-regulating action of mind and body." It is altogether a question of degree and dose. A glass of wine does not ordinarily cause people to see double, to speak inarticulately, to aim awry, to stumble or oscillate across the breadth of the street, or move forward in a series of exaggerated arches—no more does a grain-dose of opium. Half-a-dozen glasses of wine may easily bring about these results, and half-a-dozen grains of opium may produce even more marked effects on the muscular system and the locomotor nerve-centres, viz., utter helplessness, placidity, and torpor.*

* "The difference between alcohol and opium," writes an American clergyman, who endeavoured to substitute the use of the former by the latter, and only established a double tyranny, "in their effects on body and mind, is (judging from my own experience) very great. Alcohol, pushed to a certain extent, overthrows the balance of the faculties and brings out some one or more into undue prominence and activity, and these the inferior and lower faculties. A man, when drunk, becomes worse than bestial. With opium, it is the reverse. Opium lifts a man's mind from the place where it finds it, to a higher platform, the faculties all retaining their former relative positions, *i.e.*, takes the mind as it is, intensifying and exalting all its capacities of thought and susceptibilities of emotion. Extravagant as it may sound, this is not the whole truth. Opium weakens or utterly paralyses the lower propensities, while it invigorates and elevates the superior faculties—both intellectual and affectional. The opium eater is without sexual appetite; anger, malice, envy, and the entire hell-brood claiming kin to these, seem dead within him, or at least asleep; while gentleness, kindness, benevolence, together with a sort of sentimental religionism, constitute his habitual frame of mind. If a man has a poetical gift, opium stirs it into utterance. If his vocation be to write, opium imparts a before unknown power of dealing with such a theme. If called to speak in public, opium gives him a copiousness of thought, a fluency of utterance, a thrilling eloquence which melts and sways his audience."

"For 2½ years I steadily took half-an-ounce of gum-opium,

It is, of course, not contended that the influence of these powerful agents is *wholly*, but only to *some*

or a quarter-of-an-ounce of morphia daily, performing as much literary labour as in any prior period of my life, intellectually vigorous and with my bodily health unimpaired." More than the above quantity tended rather to clog, to stupefy and nauseate than to stimulate. . . . I never went on increasing the dose above the point named, but would remain stationary for years at this amount."

"It is *only during the first few weeks* after commencing the use of opium that one feels palpably and distinctly the thrilling of the nerves, the sensation of being raised and stimulated above the previously existing physical tone! All the effects produced after that are to keep the body at that level of sensation in which one feels positively alive and capable to act, without being impeded and weighed down by physical languor and impotence. Such languor and impotence one feels from abstaining merely a few hours beyond the wonted time of taking the dose. *It is not pleasure*, then, that drives onward the confirmed opium eater, but a necessity, scarcely less resistible than that fate to which pagan mythology subjected gods not less than men."

"Disinclination to and incapacity for exertion or locomotion is very characteristic of the opium eater. To sit in a rocking chair or recline on a sofa or bed is his favourite mode of disposing of himself. His lungs are deficient in free play, and he pants or palpitates from any quick action. His liver too is torpid, he is constantly more or less costive, the fæces being hard and painful to expel. Still for all this, my opium-consuming years *were as healthy* as any years of my life!"

"But what of the effects of opium eating on the mind? The one great injury it works is (I think) *to the will*. Hardihood, manliness, resolution, enterprise, ambition, become debilitated or extinguished. Reverie, the perusal of poetry and fiction, become the opium consumer's darling occupation, and he hates every call that summons him from it. He shrinks from competition with his fellow-men, he seeks not life's prizes, he fails to perform its duties. Solitude with his books and dreams, leading to no external action, constitute his chosen world. In a word, he is a species of maniac, though sane within his own chosen sphere."

extent identical: the exact limits and nerve-centres influenced by so complex a substance as opium is even yet by no means finally determined. Hufeland regards opium as an *excitant* of the circulatory system, a *sedative* of the nervous system, but M. Pecholier, of Paris, the most recent writer on the subject, rightly limits, as we think, the sedative action to one portion of the nervous system, viz.: *the sensory*. "On all other functions of the nervous system it acts in the first place *as an excitant*: this excitant power is as strongly marked over the intellectual activity and muscular contractility as over the circulation and the respiration. It is true that a *depressant action succeeds the original excitement*, and that this sedation is so much the stronger as the excitation has been more marked; but this is a kind of fatigue; it is not the principal, primary, and direct effect of the opium. A small amount of reflection will convince us that opium must necessarily possess varying properties connected with the diverse substances comprised in it. If thebaine, narcotine, and papaverine are essentially endowed with an *excito-motor power*, morphine, and still more narceine, are essentially *sedative*, at least in relation to the nervous system. In moderate, or even in somewhat toxic doses, opium always produces the same succession of phenomena, but if massive doses be given, the *excitant effects are suppressed*, and the opium at once acts as a sedative." Again, "*the excitement of the intellectual faculties produced by opium is very marked.*" Here we have a *little understood* effect of opium on which M. Pecholier rightly lays stress! "Opium diminishes all the secretions except the cutaneous, and enfeebles nutrition of the body; nay, causes a *cataplexy (or arrest) of nutrition.*" To this Headland adds, "opium acts

supremely on the brain, destroying for a time its influence over the body, its power of co-ordinating motions or receiving impressions. It suspends the action of the special senses, yet the immaterial part, *the thinking mind itself*, is least interfered with. It may wander far in dreams, cut off from all knowledge of the external world and debarred from all intercourse with it—a disembodied spirit that for a time has lost its hold on matter.”*

In opposition to De Quincey, then, we venture to class opium and alcohol together as primarily stimulants, exhilarants, inebriants, or intoxicants; and secondarily as sedatives to the nervous system and the circulation.

Much depends on the dose and constitution of the individual. The influence of the drug upon Europeans is far less exciting than in the case of some Orientals. Boeck says the stage of excitement lasts much longer in Orientals than in Northerners (Europeans probably intended). Malays, for example, are rendered outrageous and quarrelsome by the opium pipe. The first effect of the drug on Chinese smokers is to render them animated and loquacious. Gradually the conversation drops and laughter is excited by the most trifling causes: to these effects succeed vacancy of countenance, pallor, and deep sleep of from one to four hours' duration. Such is the testimony of Mr. Smith, surgeon at Pulo-Penang, quoted

* “Day says, “opium’s greatest fascination consists in a semi-paralysis of the organic functions, leaving the cerebral man free to exhaust all the vitality of the system in pleasant feelings, lofty imaginings, and aerial dreams, without a protest from the ganglionic man who lies a mere stupefied beggar, deprived of all the energy required to carry on the business of the stomach, the bowels, heart, liver, and kidney.”

by Pereira, and it could easily be supplemented. The Rev. Griffith John, of Hankow, says, "the opium smoker is never satisfied with less than the *intoxicating effects* of the drug." The Indian tribes of the North American Continent, it will be remembered, took the "fire-water" introduced by British traders with the express purpose of getting "dead drunk." Less than this came short of their idea of the use and virtue of the beverage. The wandering gipsy tribes of this country, and a certain small proportion of the civilised inhabitants also, *get on the spree* periodically with the clear intention of *drinking themselves drunk*.

*Commonly indulged in for the sake of its deeply
narcotic effects.*

The Rev. G. John asserts the same immoderation in the use of opium to be characteristic of Chinese opium smokers. "He smokes with the view of making himself drunk, and his cravings are never appeased until he gets drunk. If time and means permit, he lives in a state of ecstatic trance or intoxication, from which he never desires to be waked up. Opium smoking cannot be compared with moderate drinking, but with drunkenness itself."

Similarly Dr. Anstie. "The general debauchee of narcotism *loves to be drunk* with his particular narcotic. He loves to be carried away from all the actual surroundings of life and placed in a fool's paradise, filled with illusions of sensual delight. It is quite a different feeling from that of a man who take a moderate dose of a narcotic to relieve weariness or pain, and who thinks that by increasing the dose the relief will be increased. Such a man as

this last has *no desire to be drunk*, but this feeling is the great secret of the hopelessly downward progress of the ordinary victim of alcoholic intemperance." The very same feeling undoubtedly operates in the case of the opium debauchee. "Here we recognise at once the interference of *moral* considerations with our physical problem. It is not merely because physical necessity requires a larger quantity of the narcotic to be taken, that the confirmed debauchee increases his dose of alcohol, of opium, or of coca, but it is because his debased moral nature loves the unnatural delights which can only now be obtained by such increase. I confess that this very moral debasement has often appeared to me more inherent in the individual's own character than dependent upon the progressive action of the narcotic, mischievous as that may be."

Narcotic indulgence reveals the original basis of character: but also strengthens the selfish and the sensual propensities in man.

"It must be remembered," continues Dr. Anstie, "that the action of narcotics temporarily *reveals the original basis of the character*, rather than inspires any evil thoughts or feelings. There are a considerable number of persons born into the world with a distinctive *tendency to sensualism*, and it is among such that the victims of narcotic excess are chiefly found." But De Quincey in another passage contradicts himself, and yields up the position for which we are contending. "Wine, like opium," he admits, "up to a certain point, and with certain men, rather tends to exalt and steady the intellect. Half-a-dozen glasses of wine advantageously affect my own faculties, brighten and intensify the consciousness, but

still wine constantly leads a man to the brink of absurdity and extravagance, and beyond a certain point it is sure to disperse or volatilize the intellectual energies; whereas opium always seems to compose the mind and assist in the concentration of its powers." In other words, the effects of the two agents in moderation are fairly comparable, both leading to temporary exaltation of mind; but whereas an overdose of alcohol produces extravagance of behaviour, an overdose of morphia or laudanum induces idiotic helplessness and torpidity! One of the principle examples adduced—a surgeon who took 450 drops of laudanum daily for 20 years for some painful disorder, declares that its effect upon him was simply intoxicating; "that, in brief, he was daily drunk with laudanum!"

Dr. Palmer, Professor of Physiology in the University of Louisville, says, "De Quincey and others have founded the pernicious notion among the laity that there is something far more exhilarating, far more divine in the intoxication produced by opium than in the common intoxication of alcohol, but though I have been brought much in contact with opium eaters, I have never met with one who even approximated to the happy-go-lucky" character of the drunkard. Opium eating is a curse without any qualifying dispensation—a black cloud in a sunless life."

Is the excitement induced by opium followed by proportionate depression?

To this question De Quincey gives a very decided negative. He denies "that the elevation of spirits produced by opium is necessarily followed by proportionate depression, and that the natural and even imme-

diate consequences of opium *are torpor and stagnation*, animal as well as mental." "The torpor assigned to the practice by those who have witnessed the effects on Turkish opium eaters and the inmates of opium dens in China," he denies. But surely the testimony of a host of credible eye-witnesses—ambassadors, travellers, medical men, and missionaries—with respect to the latter point is more than sufficient to negative the unsupported assertion of one man. He is at least equally inaccurate with respect to the former part of the statement. We have just quoted Pecholier; other witness is hardly necessary. Dr. Lockhart, of China, says, "When a smoker first commences the use of opium, it acts as a pleasant and refreshing stimulant, an artificial vigour and tone are given to the system, followed by a *corresponding relaxation and listlessness*: after which an effort is made to remove the latter by a return to the pipe."

Dr. Ringer says, "To one unaccustomed to opium, a *small dose* produces a soothing and luxuriant calm of mind, followed in the course of an hour by a disposition to sleep or to general repose of mind and body, undisturbed by pain. After a larger dose, the primary stage of excitement is very brief, and *narcotism speedily supervenes*. The sleep soon passes into profound insensibility; the pulse becomes thready, the muscles relax, and death takes place by collapse or from paralysis of the respiratory muscles."

Dr. Anstie says that "*considerable depression* frequently follows upon the hypodermic injection of more than $\frac{1}{6}$ part of a grain of morphia, the patient being unfitted for work during the rest of the day; and that persons become habituated to opium by a long persistence in the hypodermic injections, so

that on discontinuing them, the same *depressing effects* are suffered therefrom as by an opium eater deprived of his opium."

The stage of excitement is followed by proportionate recoil !

Dr. Fleming says, "the earliest manifestations of the indulgence occur in the nervous system, *between the doses*, when the influence of the drug has passed away. The patient *then suffers from extreme depression*, he is restless, peevish, often shows much childish impatience and fretfulness, nothing satisfies him or gives him pleasure, he exhibits a singular incapacity of fixing the attention, or of taking an interest in the ordinary affairs of life. This condition of misery continues until relieved by a fresh dose, when the mind recovers its tone, the nervous system is tranquilised, and the sufferer luxuriates in a sense of returning happiness and enjoyment."

Drs. Humphreys and Hackley, Editors of Niemeyer's "Text Book of Practical Medicine," (Art. opium-eating), say that "when the opium eater's nerves are '*keyed-up*' by a fresh dose he seems bright and lively, but when its action is spent, the features have a sunken appearance and bad colour, they are bedewed with clammy moisture, the hands tremble, he can neither eat nor sleep, *he suffers great mental depression* and manifests a restless longing for more of the drug."

Mr. T. T. Cooper, the Chinese traveller, says it is no uncommon thing in one's early walks around the city wall of Chinese cities to come across the half-naked, dead bodies of opium smokers, who had succumbed to the combined effects of cold and privation of their customary stimulant. Dr. Lockhart once encountered a group of three or more opium smokers,

who, scantily fed and clothed and wholly unable to procure opium, died miserably, under his very eyes, from mortal *depression of the vital powers*.

In making the foregoing statements, De Quincey is strangely oblivious of all experience, other than his own, as well as self-contradictory! "He himself," so he says, "never sought solitude, nor that torpid state of self-involution ascribed to the Turks. When he went in for an opium debauch (the words are his own), it was to frequent the theatre, to hear Grassini sing, or wander forth amidst the busy throng in the market of Manchester of a Saturday night!"

It is quite true that if a man, under the influence of the primary excitement of opium, will resolve to keep awake, to compose or work at something requiring concentration of mind, he may do so, but the temptation is all the other way, viz.—to yield to the half-dreamy and slumberous influences of the drug. "Hence," continues De Quincey, "in candour I must admit that these (the theatre and such like) are not the appropriate haunts of the opium eater, nor the situation for the approach of the divinest state incident to its enjoyment. Crowds become an oppression to him: he naturally seeks silence and solitude as indispensable conditions of those trances or profoundest reveries which are the crown and consummation of what opium can do for human nature. Seated at an open window, overlooking Liverpool and the sea, *I have continued motionless, from sunrise to sunset, as if frozen, [without consciousness of myself as of an object anywise distinct from the multiform scene before me.* I seemed to stand at a distance, aloof from all the uproar of life; as if the tumult, the fever, and the strife were suspended: a respite granted from the secret burdens of the

heart; some resting from human labours: some Sabbath of repose: the hopes which blossom in the paths of life, reconciled with the peace which is in the grave: the blessed household countenances restored again, 'cleansed from the dishonours of the tomb.'"

If this be "the crown and consummation" of what opium can do for human nature, viz.: *to temporarily stimulate the enjoying and half-dreaming faculties*; to induce a kind of narcotic delirium in the case of the literary dilettante; a sort of beatific intoxication in common mortals; a Turk's paradise to the Hedonist and the Voluptuary—to every man according to his soul's bent and quality—the question will be asked, is it worth the risks that are run? is it lawful? is it judicious and safe?

Neither lawful nor safe!

It is not lawful for a man, except for the relief of acute suffering, to seek to induce a condition in which he can hardly say whether he is in the body or out of the body; in which, helplessly passive, he can neither defend himself from attack, nor save himself from danger; in which he can neither think to purpose, nor labour, nor pray, but only dream; prostituting all the godlike powers and endowments of his nature for the enchantment of an hour! It is neither judicious nor safe, for the constant repetition of the act induces an indolent, sedentary, procrastinating habit, which is simply ruinous to the business man, in whom promptitude and despatch are primary virtues, and scarcely less so to the student and the litterateur, who are unfitted by it for the continuous labour and drudgery by which alone any enterprise is carried out to successful achievement. It produces a disinclination to all business.

The man becomes a moral paralytic !

The constant and increasing use of the drug—for this is the rule—at length enfeebles the will and makes the man *a moral paralytic*, of all spectacles, the most pitiable this side the grave! All other losses are as nothing—health, means, friends—to this overwhelming deprivation, viz.: the power to will, resolve, and do! The man is a slave,

. “and seeks again
His charnel-house and chain!”

The horrors exceed the fascinations of the drug!

But De Quincey himself declares the horrors of opium to be at least equal to its fascinations, flatly contradicting himself as to the depression which he had just alleged *not to follow* upon a debauch! My brother, Professor Shearer, of Bradford, who, during his student life in Edinburgh had access to the best information, says that he always understood Mr. De Quincey himself to be a striking instance of the fact of *torpidity and depression* following upon the preliminary stage of excitement from the use of opium. “He,” Mr. De Quincey, “was *never himself*, hardly ever visible or out of bed until late in the day. Then he was primed and ready for talk, fortified doubtless by a fresh dose.”

Subsequent torpidity and depression, as well as incapacity and remorse.

“I sank,” writes De Quincey in the closing part of his book, “under the lulling seductions of opium into total sedentariness. Intellectual torpor characterised all the years, and every part of them, during which I was under the Circean spells of opium.”

"But for misery and suffering I may be said to have existed in a *dormant* state. I could seldom prevail on myself to write a letter, and they lay unanswered on my table for weeks, and even months, But for the assistance of a friend, my whole domestic economy must have gone into irretrievable confusion."

To the opium eater this state of *incapacity and feebleness*, the embarrassments consequent upon procrastination* and remorse, arising from a sense of duties unfulfilled, will be found most oppressive and tormenting. The opium eater loses none of his moral sensibilities and aspirations: he wishes and longs as earnestly as ever to realise what he believes possible and feels to be his duty, but he lies like one under an incubus or nightmare, or like a man in a state of paralysis, *helpless as an infant in sight of all he would fain perform!*

"Under the influence of the larger quantities,"

Procrastination and loss of time amongst the incidental evils.

* One evil incidental to opium smoking, is *great loss of time involved*. Dr. Collins says: "An ordinary amount of opium, say two or three candareens, occupies one or two hours in smoking, while two or three mace and upwards must take up a large portion of the available time in a day. A large portion of a Chinaman's working day passes before breakfast, but an opium smoker is unable to do anything until after his first dose, which he takes after breakfast. If he takes also a mid-day and afternoon pipe, as many do, the tax upon his time is felt as a heavy bondage by the man dependent upon his own exertions for his daily bread." A traveller in Kweichau observes, "The men on rising in the morning take two or three whiffs: when going out to labour, they must again take two or three whiffs, else they could not work! Opium smokers smoke late into the night: and on the following day they do not rise frequently *till afternoon!*"

says De Quincey, "I suffered indescribable mental agonies, and sank into a state of mental imbecility which made me dread the loss of reason or life. Nothingshort of mortal anguish in a physical sense, it seemed, to wean myself from opium."

Mental imbecility and lunacy at length threatened!

"Yet on the other hand," concludes De Quincey, "death itself, through overwhelming terrors—death by brain fever or lunacy, seemed, too certainly, to besiege the alternative course."

S. T. Coleridge also, with all his splendid powers and acquaintance with the letter and spirit of the Christian religion, was no better than a slave to this baneful drug, though the quantity taken was at length under Dr. Gillman's tender management, so greatly reduced as not materially to affect his health and spirits. It is notorious how he resorted to all kinds of prevarication and deception in order to conceal his indulgence in a habit which he nevertheless regarded as *criminal!* hiring porters and cabmen one day to oppose by force his entrance into druggists' shops, and bribing them the next to let him pass! Like De Quincey, he pleaded bodily suffering, in the form of a rheumatic affection of the knees, and dyspepsia, for which he was "ignorantly prescribed opium, and thus he says he was *seduced* into the practice till the body (?) contracted a habit, and opium became a necessity." He says he never took it for any pleasurable gratification it yielded him, but simply to get rid of a *gnawing pain while awake and the horrible wakeful wilderness of sleep*—both of which conditions, however, are notoriously *penalties of the practice*. It produced in him, as did indulgence in alcohol in the case of his son, Hartley Coleridge,

(and the lamented brother of Charlotte Bronte also), a slave at once to opium and alcohol, a *paralysis of the will*, so that he could not do the things that he would. What literary remains have not these memorable names left behind of hopes defeated, of baffled efforts, of materials uselessly accumulated, of foundations laid that were never to support a superstructure, of the grief and ruin of the architect, and who does not lament—a lamentation brought out into high relief in their confessions—how much of the imbecility, vacillation, intellectual torpor and aimlessness, which defrauded themselves and the world of great results, was due to the enthrallment of opium !

Finally, under this head, I may mention the case of a lady accustomed to the daily use of laudanum to the extent of two ounces or more, who being asked one day how she felt when her customary stimulant was withheld, gave the following reply :—“ I feel exceedingly ill ; a great sinking and weakness comes over me, cold perspirations break out all over the body and literally drops from the forehead, the whole system is relaxed, and I feel on the point of dissolution ! ”

A traveller in British India says, “ Early morning is the time when the opium seller drives his principal trade, for the effects of last night’s debauch being worn off, the wretched victims surround his table eager to obtain the day’s supply with which to satisfy the craving and put them out of their misery. What a fearful group is here ! Youth with sunken eye and languid frame : old age tottering on two bamboos in rags and wretchedness. Scattering from trembling hands the few annas demanded in payment, the purchaser, as if dreading the detecting eye of his happier and more resolute fellow-creature, skulks

feebly back to his home, to enjoy an artificial state of existence, too dearly purchased by a premature and unlamented death, and by the destruction of every natural feeling implanted within him."

Depressive recoil must follow all but the most moderate use of the drug.

Anstie well expresses the truth in the following proposition :—" *Depressive recoil* follows the use of narcotics in any but restricted doses, for the sake of their stimulant effects." Dr. Barnes, of Ohio, also says, "this despondency, with feelings of shame, depression, and remorse, sometimes culminating in suicide, appears to be the legitimate effect of the continued use of opium."

Are increasing doses required to produce the original effects ?

In the third place, it is usually understood that *increasing or cumulative doses of the drug* are necessary to insure the *original stimulating and exhilarating effect*; but De Quincey denies this. He denies the proposition "that either you must renounce opium, or else indefinitely increase the daily ration." But how, it may be asked, did De Quincey himself reach his amazing average of 8,000, 10,000, or 12,000 drops, equal to something like an imperial pint of laudanum daily? Not certainly *per saltum*, for though he bore a charmed life, more than ordinarily proof against the sinister effects of large doses of opium, continued more or less through a period of 50 years, yet he reached his perilous pre-eminence by *carefully adjusted increments*, constantly added, in order to secure the narcotic delirium in which, beyond all doubt, some of his most important works

were written. It is humiliating and painful to be obliged to confess, and may perhaps help to explain their weird and visionary quality, that the "Ancient Mariner," "Christabel," and the "Suspiria de Profundis" of Coleridge, are also but opium dreams, sad ravings, in some respects, opium-inspired.

Dr. Anstie has shown that a degradation of structure takes place at length in the nervous centres subjected to this repeated stimulation, partly due to the direct action of the poison, partly to the impaired nutrition of the body. It is the same with alcohol as with opium. The habitually moderate opium eater or alcohol tippler most commonly takes little food; but life is supported in a considerable number of cases, for a time at least, with little apparent diminution of vigour. The result of this abnormal mode of nutrition is still further disastrous to the nervous system. Deprived of the proper nutriment, which it can only obtain from an active supply of good rich blood, the nervous matter tends more and more towards degeneration. Sudden rupture of the brain fibres, putting an end to life at once, may occur, or more commonly there is gradual shrinking of the brain and spinal cord and degeneration of their vesicular matter as a frequent issue of chronic narcotism.

*As the jaded horse requires more of the whip and the spur.
Physiological explanation.*

It is easy to comprehend how, such vesicular degeneration going on, the narcotic effects are less easily induced: *more and more of nervous tissue is thrown out of gear*, and there is less and less of impressible matter on which the narcotic may operate. Thus the confirmed opium eater, drunkard, or coca

consumer *require more and more of their accustomed narcotic* to produce the intoxication they severally delight in!

The blood must now be saturated to a high degree with the poison, so as to ensure an extensive contact of it with the nervous matter, if he is to enjoy once more the transition from the realities of life to dream-land, or the pleasant vacuity of mind which this or that form of narcotism has afforded him.

And herein lies the baser part of narcotic temptation!

N—C—, an intelligent Chinese trader, resident in London, declares his belief—a belief shared in by his fellow-countrymen—that *opium incites the moderate smoker to constant increase*. “Show me,” says he, “one instance where a man has been adhering to a fixed allowance of opium with which he had commenced ten years ago, and I will show you a hundred cases where men began with a very moderate quantity, but within ten years they increased their allowance to such an extent that they were ruined.”

I think we cannot deny that many opium smokers are “*moderate*” *for a time*, and that, while they are so, their indulgence does them no *visible* harm, and that in some cases they are able to keep to this moderation even to old age. Generally speaking, however, it is not so. The universal testimony is to the effect that “the use of this stimulant imposes the necessity of continual increase.” Sir Rutherford Alcock says that moderate opium smoking lasts only for a time, and that they all *go steadily on* to that stage which is self-destructive.

The graphic account of the baneful effects of the

drug presented to the Emperor by one of the censors, and quoted in Davis's "China," vol. ii., p. 409, bears out the above conclusions. The extract, a decoction resembling molasses, is the form used in smoking. A small wire is dipped into this extract; it is lighted over the flame of a small lamp, inserted into the bowl of the pipe. which is inverted, and so smoked in a reclining posture. Those who smoke opium have a *periodical longing* for it, which can only be assuaged by the application of the drug at the regular time. If they cannot obtain it, when that daily period arrives, their limbs become debilitated, a discharge of rheum takes place from the eyes and nose, and they *are altogether unequal to any exertion*: but with a few whiffs, their strength and spirits are immediately restored in a surprising manner. This opium becomes, to opium smokers, their very life. I had the curiosity to visit the opium smoker in *his heaven*: and certainly, it is a most fearful sight, although perhaps not so degrading to the eye as the drunkard from spirits, lowered to the level of the brute and wallowing in his filth. *The idiotic smile and death-like stupor, however, of the opium debauchee* has something more awful to the gaze than the bestiality of the other. The rooms where they sit and smoke are surrounded by wooden couches with head-rests, and there is generally a side room *devoted to gambling*. . . . On a beginner, one or two pipes will have an effect, but an *old stager will continue smoking for hours*. As fire must be held to the drug during the process of inhaling, there is generally an attendant, who waits upon the smoker to perform this office. A few days of this fearful luxury, when taken to excess, will give a pallic and haggard look to the face: and a few months, or even weeks, *will change the strong and*

healthy man into little better than a skeleton.. The pain they suffer when deprived of the drug, after long habit, no language can explain, and it is only when to a certain degree under its influence, that their faculties are alive. In the houses devoted to their ruin, these infatuated people may be seen, at nine in the evening, at all the different stages; some entering half-distracted, to feed the craving appetite they have been obliged to subdue during the day; others laughing and talking wildly under the effects of a first pipe, whilst the couches around are filled with their different occupants, who lie languid, with an idiotic smile on their countenance, too much under the influence of the drug to care for passing events, and fast merging to the wished for consumption. The last scene in this tragic play is generally a room in the rear of the building, *a species of dead-house*, where lie stretched those who have passed into the state of insensibility the opium smoker madly seeks—an emblem of the long sleep to which he is blindly hurrying.”

Does opium impart the power of conjuring up phantoms at will and give command over them?

In the fourth place, while emblazoning the wonderful powers of opium over bodily disease and pain, De Quincey *claims for it empire and sway over the grander and more shadowy world of dreams*. We should have thought De Quincey nearer the truth had he stated in less ambiguous and pretentious language that opium, so far from giving man empire and sway over dream-land, makes him a slave to visions and terrors of the night, and that it alone is responsible for the shadowy terrors which settled and brooded over his own whole waking life.

Opium initiates the visions, but gives no command over them !

Too often the phantoms refuse to go when bidden, or linger till they drive their victim to the very borders of despair, and they even intrude themselves, uncalled for and forbidden guests into his waking hours! As a child, it appears, De Quincey had the power of painting as it were upon the darkness all sorts of phantoms, and it was about twelve years after he had commenced the intermittent use of opium, that this faculty became distressing to him. The minutest incidents of childhood and the forgotten scenes of later years were often revived. "Placed before me in dreams like intuitions, I recognised them instantaneously, and I became assured of the fact, that the secret inscriptions of the mind are indelible for ever."

The past life unveiled.

That happened to him which occasionally occurs in the experience of persons in peril of instant death by drowning, "I had a solemn apocalypse of my past life." Whatever powerfully exercised his fancy while awake was reproduced again during sleep with a vivid and ghastly splendour that fretted the heart. "The sense of space and time were both powerfully affected. Buildings, landscapes, &c., were exhibited in proportions so vast as the bodily eye is not fitted to receive. Space swelled and was amplified to an extent of unutterable and self-repeating infinity. There was a vast expansion of time, and this disturbed me most. I seemed to have lived through a hundred years in one night, nay, sometimes I had feelings representative of a duration far beyond the limits of human experience."

Ideas of space and time vastly extended or minimised.

Dr. Richardson confirms the statement of these extraordinary effects of opium. "*Space* is extended, so that objects near at hand appear to be immensely distant, and objects of small size exceeding large. Yet with all this difference, the sense of proportion remains correct. *Time* is extended into equally vast intervals, or conversely the ideal of a lifetime of events is compressed into the period of a mere second. Then the dream slowly passes into unconscious existence, and after a prolonged sleep there is a return to the every-day life, but not to the happiness which should attend it."

One of my lady patients, under treatment with morphia and the salicylates for rheumatic fever, had a frequent impression on her mind that she was climbing impracticable stairs and falling over precipices; she took her husband for some great snoring monster who would not waken at call; she imagined the room, at times, all a slope and half full of water, and her legs when racked with pain and immoveable she took for two huge blocks of shining coal. She had a constant wish to change them for a lighter pair, which, in fancy, she did as the effect of the morphia abated, until it passed off altogether, when her limbs seemed to her to return again to their normal size.

It appears that in haschish-narcotism there is also an *enormous magnification of time and space*. (Anstie, Von Bibra, and others.) After taking grain and a half doses of extract of belladonna, Dr. Anstie experienced *involuntary phantasies* and disgusting spectra of cockroaches and beetles, the horror of his childhood. He believes there is nothing "*crea-*

live" about these processes, and the explanation he gives is of first-rate importance, but that there is merely an *unveiling*, in varying order and capricious combination of various *antecedent impressions*. They are the result of the destruction, or at any rate the *paralysis for a time of the brain's capacity for performing its higher functions*.

The subject matter, so to speak, of his (De Quincey's) dreams, I endeavour to condense from the "Confessions." "Vast processions moving along continually in mournful pomp: friezes of never-ending stories: theatres of more than earthly splendour suddenly lighted up within the brain: cities, palaces, and towers, 'all carved from the carver's brain,' yet less substantial even than those seen in the clouds:—

‘that on their restless fronts bore stars;’

to which succeeded visions of lakes and watery plains and stormy seas and toilers of the deep. At length came the tyranny of the human face, solitary or in crowds, wrathful, imploring, despairing, by thousands, by myriads, by generations."

*The literary genius and characteristic studies of the man
betrayed in his dreams!*

"I ran into pagodas, was fixed for centuries at the summit, or confined for ages in secret, mysterious chambers of the dead. I was the idol, I was the priest: I was worshipped, I was sacrificed. I had done a deed, they said, which the ibis and the crocodile trembled at, and expiation must be done by lying buried in stone coffins at the heart of eternal pyramids. Over all brooded a killing sense of eternity and infinity. . . . Then came dreams of a different character. Tumultuous dreams, com-

mening with music, undulations of fast gathering tumults, infinite cavalcades filing off, the tread of armies, the sense of some mighty impending catastrophe, deepening confusions, mysterious eclipse and defeat, sudden alarms, the trepidations of innumerable fugitives, the abhorred name of death and everlasting farewells !”

Visions followed by suicidal despondency.

“All this was accompanied by a deep-seated melancholy wholly incommunicable by words. The weight of twenty atlantics was upon me and the oppression of inexpressible guilt ! I seemed literally to descend into chasms and sunless abysses from which I never hoped to reascend, and out of which, even by waking, I never felt that I had reascended ! The state of gloom which attended these gorgeous spectacles amounted to *utter darkness, to suicidal despondency unutterable by words !*”

Dr. Lamson, who was convicted of poisoning his brother-in-law, was for years a victim to the opium habit. He took the morphia in combination with atropine, because the anodyne and narcotic effects of the former were thereby enhanced and the sickness frequently induced by morphia alone was obviated. After a time he administered the medicine to himself hypodermically. It took surprisingly large quantities to induce sleep. Emaciation, loss of physical strength, cough and dyspnoea resulted, and abscesses containing very foetid pus formed from time to time in the track of the hypodermic syringe. But the physical results, though severe and horrible, were as nothing, according to his own confession, to the mental and moral injury he sustained. On waking from the forced unnatural sleep, induced by

the drug, his mental and physical faculties were for some hours in a most peculiar indescribable state. The whole aspect of anything became strangely and completely turned upside down. *Life became utterly mechanical*, and the mind was possessed with the vaguest and most unreal fancies and imaginations. Real troubles, however slight, became terrific, unconquerable, and gave rise to the most dreadful anticipations, and *a despondency impossible to realise*. The most unaccountable things would be said, done, and thought of, while under the influence of the drug. Everything seemed one's own particular right, there was complete inability to draw the distinction between truth and falsehood, right and wrong—in fact, to a great extent the power of distinguishing and discriminating was lost. "*I suffered also*," he writes, "*a loss of knowledge of time and distance. My memory for names, faces, and events of daily life was almost annulled, Procrastination and an unconquerable tendency to put things off to another time became the rule of my life. With all this demoralisation I cherished a firm conviction that in a few days I should discontinue the habit. But that day could never come.*" His own belief was that in this strange state of morphinism his brain was comparable with that of a man suffering from softening of the brain or other actual lesion of structure.

Substitution of opium for alcohol.

In the case of another medical man, known to me, who has substituted the use of morphia with atropine, by hypodermic injection, for champagne and spirit drinking, the appetite and natural tendency to obesity are undiminished and the general health continues good. He cannot, however, apply himself to

reading, and quickly forgets what he has read, and there is a great tendency towards *inertia* and inactivity in the practice of his profession. The period of pleasurable sensations passed away with the first few months' use of the drug: he now takes it merely for its contro-sedative effects, getting no enjoyment out of it, to ward off an otherwise certain depression, restlessness and discomfort which would supervene. He has tried to do without the injections altogether, but the supervention of a distressing and prostrating diarrhœa, damps his resolution and compels an immediate return to the morphia. Excepting for the *loss of memory and the physical and mental indolence*, he thinks himself not a whit the worse for the indulgence, and far better off than he would be under the dominion of alcohol.

Dr. Tanner has recommended the use of opium, in substitution for alcohol as the lesser evil of the two in the case of inveterate drunkards. That any human being can permanently substitute the daily use of the one in place of the other is more than doubtful. Attempts of this kind have not unfrequently been made, but the result is uniformly the same—*a double tyranny is established*.

A clergyman who for years had written and preached with at least average success under the inspiration of alcohol, and who found himself surprised into occasional fits of intoxication, tried laudanum as a substitute, and at first seemed lifted out of the pit into Paradise. "Instead of the feverish, tumultuous, excitement of alcohol, I experienced," he says, "a calm, equable, thrilling enjoyment: I had entered upon a region of serenity, and peace, and quiet bliss. It was a most fatal move! The total prostration, the depths of depression, the more

than infantile feebleness following the reaction from this excitement, the multitude of uneasy, uncomfortable, often bewildering sensations pertaining to the habit. . . . No!" . . . "And very soon opium lost its power to excite and enliven, though I was obliged still to take it, to keep the very current of life flowing, and I tried to find in strong tea, coffee, tobacco, and alcohol again the excitement which opium now would not give. The result was that all of these indulgences became fastened upon me, and with this most unhappy circumstance superadded, that I never could be certain beforehand of the effect which alcoholic stimulants would have upon me." He managed to break his chains for a time, while undergoing the water-cure at a hydropathic establishment, but soon again relapsing into his old habits, he was admitted an indoor patient of the New York Hospital, and died there.

Such is the testimony of some of those who *all but* experienced it, in proof of the suicidal tendency of indulgence in opium. I should think that any life whose supreme pleasure was derived either from the wine cup or the opium pipe might be likely any day *to culminate in suicide*, and doubtless suicide is as frequently traceable in China to disgust with life in the case of the opium smoker, as it is in England in the case of inebriates. It is seldom that a man whose life is charged with any serious purpose commits suicide. Drink is one of the primary causes both of lunacy and self-destruction. No habit so quickly robs life of its bloom and its beauty, or strikes its victim with a more insupportable sense of degradation and hopeless worthlessness. All this applies with redoubled force to the opium debauchee. They see themselves, the inevitable slaves of a vice which

they cannot control: and after a weary experience of its manifold miseries, they come to the conclusion that an existence which derives its sole happiness from opium-intoxication had better be put an end to. Sometimes the reproaches of parents and relatives give an added sting to their own self-contempt and precipitate the issue in self-slaughter, as I have known in the instance of two young men in Kew-Kiang. They were confirmed opium smokers, the sons of well-to-do tea merchants, and being upbraided with their evil habits by their parents in presence of a roomful of women (tea-sorters), they went away and extemporized a draught with "Samshoo," or native spirit out of solid opium, which proved speedily fatal.

Illustrations of suicidal indulgence in opium!

Two cases of suicidal indulgence in opium, on the part of Englishmen are also known to the writer. One, a medical man, who began taking laudanum for the relief of aguish-attacks—an ounce or two daily—with as much brandy also as he could get. He carried on the practice for some years, during which *he steadily degenerated in self-respect*, stealing clocks and other moveables out of the houses of his patients, and then pawning them to obtain the laudanum. He was not content with less than the deepest potations, inducing comatose sleep, but he survived the practice for only a few years. Another was a young man, keeper of a billiard room in Hankow, who from pure ennui and disgust with life, rendered almost unbearable by the social ostracism too often exhibited in small communities of Englishmen abroad, took to opium in increasing doses, till he reached the amazing quantity of half-an-ounce and more of solid opium daily. He con-

tinued this practice for two or three years, and finally succumbed to an attack of dysentery, but whether induced by an attempt to break off the habit, which was inducing the most deplorable *melancholia*, I cannot tell.

A third case of a similar nature was that of a Chinaman, aged 38, an opium smoker, who having been sharply reprov'd by his father for the practice, swallowed a fatal dose of the extract prepared for smoking, in order to *spite his father*. He had been drinking samshoo during the evening, and after swallowing four mace, *i.e.*, half-an-ounce, continued his potations, the certain effect of which must have been to present the poison to the absorbent system in the most diffused and soluble form. He took the drug at midnight, and with the usual apathy and stupidity which characterises the Chinese in matters of life and death, the relatives delayed informing me till the following morning. When they brought him to the surgery at 7 a.m. he was stark and stiff, the tongue covered with a dark brown fur, and the pupils already begun to open in the relaxation of death. In vain they entreated me now, with some show of earnestness, to "call him back to life." I told them the best thing they could do was to procure him a coffin, at which they shouldered the corpse, and chuckling and laughing at the sudden contrast of ideas, carried him away.

Dr. McGillivray reports a case of suicidal mania from opium in the *Canadian Medical Journal* for 1869. The man was a barrister by profession, aged 37, and commenced the use of laudanum for relief from the pain caused by an abscess in the thigh, but there is reason to believe that he was a man constitutionally possessed of little self-control, and he was known to be intemperate in his habits, and of

loose principles. On discontinuing the laudanum, after the abscess was cured, he became nervous, irritable and wakeful by night, and he took again to the use of laudanum and morphia to compose him. Every time he tried to disuse the remedy, a troublesome diarrhœa or some other inconvenience set in, which, to a man of his small resolution, proved sufficient excuse for returning to the drug, the use of which gradually increased upon him until he reached 3 ss. doses of the sulphate daily. He often drank down three ounces of laudanum at a gulp. He was an inveterate smoker and hard drinker, all the time, as well. One evening, to show the capability his system had acquired of resisting opium, he took 3 j. of sulphate of morphia, mixed in half a tumbler of whiskey, in the presence of the doctor, and later on in the evening 4oz. of laudanum. He spent the evening at the theatre with great complacency, and passed a quiet night, calling out next morning for more whiskey and morphia. He continued this course for a period of three years, the habit having gone on increasing from day to day until it reached these almost incredible proportions.

An example of total paralysis of the will !

*With the clear consciousness that he was destroying himself, and with every desire to struggle against the insatiable cravings of his diseased appetite, he found it utterly impossible to offer the slightest opposition to them ! An attack of delirium tremens at length concluded his unhappy career.**

* "Habituation to opium invariably tends to reduce the man to the *automatic* plane, in which the nervous system issues and enforces only those edicts required for mere animal self-preservation as it was in infancy."—*Day on the opium habit.*

Smoking themselves to death !

Smoking themselves to death with opium is not so uncommon a thing in China as some suppose. Dr. Collins, of Pekin, speaks of a gentleman whose five sons smoked opium, and who were rapidly becoming emaciated and *cadaverized* by the habit : of another, himself a smoker, whose sister killed herself by her addiction to the opium pipe. Dr. Lockhart's and Mr. Cooper's evidence of deaths actually witnessed in the case of opium smokers, through the drug, have been already given. Many are so much reduced in circumstances and in self-respect by their indulgence, that they frequent the opium dens to gather up the dregs of the pipes, and smoke or swallow the same without shame. But for the large contingent of suicides supplied through the use and abuse of opium, China, as a country, I believe, is remarkably exempt from causes of *mental alienation*, which may be attributed to two causes :—1st, the naturally placid, unexcitable, easy-going character of the people ; and 2nd, their temperate and abstemious habits. *Idiocy rather than mania* is the form commonly met with, as we might expect in a country where the mind is in a state of comparative somnolence or lethargy, where civilization has fallen into a stereotyped and degraded condition, and all the glory and the rapture, as well as the worry and competition, the speculation and the controversies of an ever-advancing civilization are unknown.

Inertia of mind predisposes to indulgence in narcotics !

Within equal periods I saw *three times* as many opium smokers at Kew-Kiang as I did at Hankow with thirty times its population (Mr. Kopsch, Commissioner of

Customs, estimating the number of opium smokers in Kew-Kiang at one-tenth of the population), and I could not help attributing the great excess of smokers in the latter place to the commercial stagnation and comparative inertia of the port. I thought then, as I think now, that the development of new industries, the opening up of the country to trade and commerce, freer intercourse with other nations and the great world of ideas—"the thoughts which shake mankind"—will do much to prevent the people addicting themselves to such an unmanly, self-involved, and degrading vice.

The Chinese a nation of undeveloped men !

The Chinese *are in no way a reflective people*, though business-like ; their school system develops their *memory* at the expense of their *judgment* : "a nation of *undeveloped men*," Père David considered them, and the prevalent habit of opium smoking can have only one effect, of still further blunting their perceptive and reflective powers.

Does the use of opium shorten life ?

In the fifth place, Mr. De Quincey asserts that "Insurance Societies *may dismiss all anxiety as to the life-abridging tendencies of opium*," and in his opinion they stand in their own light when they hesitate to accept a proposal for life assurance on the part of an opium eater, or even exact a higher rate of premium. Now there is no contesting the fact that striking examples of the tolerance* of opium to a good old age, as in De Quincey's own case and that of S. T. Coleridge may be readily adduced. Habit blunts in a most extraordinary way the sensibility to the action of opium, so that the dose, when often repeated,

must be progressively increased to attain the same end, as we have already shown. The usual effect of the opium eater's dose is *contro-sedative*, i.e., according to Christison, it simply removes the exhaustion, languor and misery of the previous debauch, and renders him for a time again active and alert. Three ounces of laudanum daily is a common allowance in the case of confirmed debauchees. Dr. Chambers adduces the instance of a crossing sweeper who for years consumed a drachm of solid opium daily. Mr. Jeffes, chemist, Liverpool, has a lady customer in Scotland, who takes 3 drachms avoirdupois of solid opium daily, extemporized into a tincture with French brandy, and who has continued the practice for a period of 20 years! and another, the wife of a shopkeeper in Warrington, who takes a pint of laudanum twice a week, and has done so for several years! Mr. Whalley, M.R.C.S., of Bradford, has published the case of a woman who after 14 years' use, has at length reached the maximum allowance of *a quart per week*, at which she continues, and without suffering either from constipation or loss of appetite! A policeman's wife, in Haslingden, Cheshire, the mother of eight children, and a hard working woman, has been in the habit of taking an ounce or two of laudanum daily, for 12 years past, and looks hale and hearty, even rosy, still.

Examples of personal idiosyncrasy.

* We do not mean *the tolerance begotten of personal idiosyncrasy* or insensibility to the action of the drug, of which the late Sir Wm. Hamilton and his son were striking examples. Unaccustomed to its use, he could nevertheless take 450 drops (about one ounce) of laudanum, without experiencing any other effects than a headache and slight constipation; while his son, aged 6, took 60 minims of solution of morphia without any perceptible effect.

Exceptional example of moderate use of opium !

Dr. Fleming relates the case of a medical practitioner, aged 67, who had taken opium for 47 years, to relieve severe nervous asthma. He had taken as much as one ounce of laudanum daily. He occasionally omitted it for months, and once he did so for a whole year. When last seen he was taking two or three drachms of laudanum daily. His practice included a large amount of midwifery, and involved great fatigue. He took his food well, and with the exception of a slight tendency to constipation, all his functions were performed healthily. He was well satisfied that the opium had helped materially to subdue the asthma and to sustain his laborious life. He could trace no injury whatever to *this moderate use of it* under these circumstances. Dr. Fleming, however, adds, "such cases are, to the best of my knowledge, *quite exceptional !*"

The late Earl of Mar, who died of jaundice and dropsy, aged 57, was accustomed to take from one to three ounces of laudanum daily for a period of 30 years, and it became the ground of a lawsuit, the fact having been concealed from the knowledge of the Assurance Company at the time of assuring his life. The Company refused to pay the policy, but they were ultimately found liable, on the ground that it was their duty to have made full and sufficient enquiries.

The late Dr. Henderson, of Shanghai, contends that there is "little or no proof that the habit of indulgence in opium shortens life. Upwards of 1500 opium smokers have been under my care, but (excepting in cases of suicide) I have not been able to trace a single death directly to the effects of

opium smoking. I often see men who have smoked 20 to 25 years, and some even 30 to 35 years, who yet appear to have suffered very little from its use." "In other cases," he admits, "visible ill effects are induced after a few months' indulgence, and the man has to stop—a matter, in my opinion, *much less formidable* than some writers say! Derangement of the digestive organs is the first injurious effect. Little food is taken, and progressive emaciation follows, with a peculiar expression of countenance and complexion never to be mistaken by the experienced eye."

Old men in their prime.

Dr. Gauld, of Swatow, writes:—"It is wonderful how many years a man will continue to smoke opium in considerable quantities, without fatally injuring his constitution, just as some drunkards at home live on, in apparent defiance of all the laws of health. *Yet the great mass become old men while yet in their prime, and are carried to a premature grave.*"

Dr. Greves, of Liverpool, was acquainted with a medical man in the country who took to tippling in laudanum, became a weazened, shrivelled-up old man while yet in the prime of life, and died at the age of 40.

Evil results of opium smoking not exaggerated.

Dr. Johnston, of Shanghai, says:—"It is believed by many that the evils resulting from opium smoking are much exaggerated. *I do not think so.* On the contrary, I believe that very few people have the slightest conception of the mischief done to the constitution by opium smoking. The principal sufferers unfortunately belong to the working classes. In their case, rapid deterioration of health, with loss

of muscular power, soon follow the use of the drug, and at no late date, disease, starvation, and death. That such is the history of a large number of cases, my experience of the Hospital fully confirms. On the other hand, those who are in comfortable circumstances in life, and who do not require to engage in manual labour, do not suffer in anything like the same degree. The deterioration of health is more gradual and less marked: it may be many years before manifest symptoms of deranged health become apparent, but however slowly the loss of constitutional power may take place, *it is none the less sure, and in every case ends in ruined health.*"

Cause of the remarkable toleration of opium in certain diseases.

Colossal doses of morphia and laudanum are borne in cases of mental alienation, tetanus, acute delirium, hydrophobia, great suffering from cancer of the uterus and stomach, poisoning by strychnia, and atropia. All these, in respect of their conditions of suffering and sleeplessness, *being contrary to the known action of opium, cause great tolerance of the remedy.* In Asiatic cholera also laudanum may be poured into the stomach like so much water, but in this case there is every reason to believe that the function of absorption is in entire abeyance.

Dr. Oppenheim says, that in Turkey persons addicted from the period of adolescence to the use of opium, *seldom attain the age of forty!* The opium eater is known by his attenuated body, withered yellow countenance, stooping gait, and glassy sunken eyes. Christison says that life is *probably shortened*, but the precise injury done to the constitution has not yet been ascertained, and some live under the

habit to *an advanced age*! "The final action of opium, when indulgence is carried to an extreme, is seen," says Dr. Richardson, "in failure of the nervous power. The centres of nervous matter, as if these, like the muscles, were undergoing waste, lose their activities, and thus paralysis of some portion of the body is a resultant phenomenon. The lower limbs fail first, then the muscles of the back, and at length the body, lame and bent, like the body of an old man, falls into the decrepitude of senile degeneration. Death from inanition, owing to complete failure of the digestive power, closes the scene."

There can be little doubt that *the occasional use, at intervals of two or three days or longer, is far less injurious to the system*, than the systematic daily use of the drug. It will be found that the *oldest opium eaters* are those who indulge themselves in large doses only *at stated intervals*!

Chinese opium less powerfully narcotic than East Indian.

It is also known that the use of *Native opium is much less injurious than the Indian*, though the latter is said to contain under three per cent. of morphia, the most powerful of all the narcotic principles in the crude drug. It contains, however, a *relatively larger* proportion of narcotine, which by some chemists is believed to be capable of conversion into morphine (Boeck), and it may be considered, in the present state of our knowledge as having, on the whole, the same kind of action as morphine.

Another authority says that Turkey opium contains the highest per centage of morphia—three times as much indeed as the East Indian drug—while Chinese opium yields even less than the East Indian. But

the discrepancies in the statements of the results obtained by various chemists make this mode of comparing the opium supplied by different countries unreliable. Were the above statement confirmed, it would go far to explain the comparative mildness of the effects of smoking native opium. Repeated and thoroughly reliable analyses of Chinese opium are very much required.

Hospital experiences of opium smokers.

During the year 1869, I saw 90 opium smokers at the Mission Hospital in Hankow. Of these—

35 smoked 1 mace* and under daily.

28	„	2	„	„	„
16	„	3	„	„	„
6	„	4	„	„	„
4	„	6	„	„	„
1	„	8	„	„	„

The latter was a woman from Szechuen. Some had been smokers for a period of three years, others for five, ten, thirteen, eighteen, and twenty-five years. The majority said that they commenced the practice at first for *pleasure*, or the relief of some pain, and a *fair proportion certainly seemed to enjoy ordinary health! A constant proportion were broken down, haggard, and wretched in the extreme!* In no single instance was any other motive pleaded for wishing to get rid of the practice than *poverty and inability to purchase the drug!*

During the year 1870, 96 opium smokers were under my care, the majority of whom seemed below the standard of health, pale, haggard, emaciated and

* The Tsëen or Mace is the tenth-part of a Tael, and as the latter weighs 600 grains, the Mace is exactly equivalent to a drachm troy weight.

spiritless, some suffering from dyspepsia, others from diarrhœa, others again from sciatica or asthma and bronchitis. In 10 or 12 cases the health seemed unaffected, though the full average quantity of opium had been consumed for a period of years.

50 smoked 1 mace daily and under.

46 „ 2 „ and over.

One, a military officer of some rank, had been in the habit of smoking 8 mace daily for a period of 20 years, but by strength of resolution he conquered the habit, and *at the end of a twelvemonth* was met rejoicing in his freedom and recovered health! Another had used 4 mace daily for 17 years, and though troubled with bleeding piles, seemed otherwise in good health. Four persons of one family, husband and wife, mother and son, used 5 mace daily, apiece, for several years, and being brought to poverty by the practice, came in this way to the Hospital for a cure!

A Mandarin and his three sons, all opium smokers, were at one time amongst my patients. Some, but only a very few, brought their opium pipes in proof of the sincerity of their wish to reform.

Of 200 opium smokers seen by me at Kew-Kiang during the half-year ending September, 1871:—

30 used half a mace (say 3 ss. a drachm) daily.

54 used 1 mace daily.

38 „ $1\frac{1}{2}$ „

41 „ 2 „

18 „ 3 „

8 „ 4 „

7 „ 5 „

4 „ 6 „

Not one of the 200 reached a tael, and 160, or four-fifths of the whole number used but 2 mace

and under! It must also be remembered that it amounts to a certainty that *the heavy smokers* of several years' standing were not always such, but were smokers of *the lesser and medium quantities for years*, increasing it from necessity, being no longer able to get the narcotic effects they desire from the minor amounts used in their earlier experience.

About two mace per diem the average quantity smoked.

Dr. Edkins, of Peking, if my experience counts for anything, vastly overstates the case, when he says that a regular opium smoker *consumes a tael of opium* daily! two mace, or one-fifth of this amount, being more nearly the average daily consumption! A large number of persons of the class of coolies, porters, and field hands, take no more than two or three candareens daily, one might say a few whiffs of the pipe!*

At the Peking Hospital Dr. Dudgeon found 60 per cent. of the opium smokers using two mace and under, 40 per cent. three mace and over. T. T. Meadows, Esq., in his "Desultory Notes on the Government and People of China," puts the average consumption of opium, I find, at about the same figure I have given. "Chinamen now smoke about one-sixth of an ounce per diem, and pay 12 cents for it." "A very great number of Chinese men, who

* Mr. Frank Trench, travelling last summer in the provinces of Kweichau and Yeunan, was told that the greater smokers use one "liang," or ounce, price 1/8 daily: ordinary smokers *about half this amount*, while many boys of 11 or 12 smoke several "fun" or candareens, and have the "Yin" or craving two or three times a day which habitual smokers acquire! (10 fun = 1 tsëen or mace; 10 mace = 1 liang or ounce.)

attend with the greatest punctuality to their daily business, and support themselves and their families in a decent manner, consume about this quantity daily."

During the half-year mentioned, one of the patients in the Hankow Hospital is noted as having smoked half-an-ounce of opium daily for 20 years; another a similar quantity for 30 years, and these did not seem more haggard and wretched than many of the others: one smoked six mace (three-fourths of an ounce) for 10 years for asthma, and a Buddhist priest, for no complaint whatever, smoked a like quantity for a period of 17 years! Dr. Hardey, of Hankow, had some opium smokers of 30 years' standing, several of whom smoked one tael (or 600 grains) daily, and one, a wealthy Mandarin, who was accustomed to the use of three taels weight daily!

Surgeon Smith, of Penang, says that for the novice five grains are sufficient, while he has known an old smoker to go as high as 290 grains. Dr. Little, of Singapore, who had the charge of 15 cases, ascertained that the medium dose was 32 grains in smokers of 10 years' standing. Rev. G. Smith found the average in 10 cases to be one mace (or 60 grains), and the general average to be three candareens $17\frac{1}{2}$ grains). Libermann gives a tabulated statement of a thousand Chinese smokers with the following high averages:—

646 varied between 16 and 128 grains.

250 ,, ,, 160 and 320 ,,

104 ,, ,, 480 and 1600 ,,

But supposing we strike the average at two mace, or a quarter of an ounce daily, what an enormous quantity this would be if taken into the stomach!

Opium smoking less detrimental than opium eating!

It is therefore to my mind beyond all question that opium smoking is far *less detrimental to the health than opium eating*, and that the effects are by *no means proportionate to the quantities employed*. It is the most wasteful method of employing the drug.

The inference I have drawn is suggested by the way in which opium smokers commonly attend to their duties almost immediately after indulgence in the pipe as in the case of servants in honges, com-pradors, coolies, porters. Habit has, no doubt, rendered them insensible to any other effect than a *restorative one* from the depression consequent upon past indulgence. But still more is the inference drawn *from the fact that the greater part of the narcotic principles are not volatilizable by the heat of the opium pipe*, and remain behind in the pipe in the form of an ash. This the "Tsa-Tsze," or dregs, containing morphine, narcotine, and other alkaloids in quantity is carefully saved, worked up with a little fresh extract to give it flavour, and made to do duty again with the poorest class of customers at the opium dens. I can call to mind more than one fatal case of poisoning by swallowing the "Tsa-tsze," or ash of the opium pipe at the Hospital in Hankow.*

* Dr. Kane, of New York, whose experience in the treatment of opium smokers and opium eaters probably exceeds that of any living physician, entirely adopts my view in his recent work on "Opium smoking in America and China," 1882. "Enormous doses," he writes, "are sometimes smoked; quantities which if taken into the stomach would certainly produce death. To get nearly the same effect as from the pipe, a smoker who is daily consuming an ounce, can pull through on 20 to 30 grains by the stomach, showing that but a small portion of the active prin-

Von Boeck, in Ziemssen's Cyclopædia, says, "Opium smokers do not appear to succumb so rapidly to the effect of chronic meconismus or morphismus, *i.e.*, the opium habit, the morphine habit, as those who eat or drink opium, at least their appetite does not wholly fail, and the disturbances in defœcation are much slighter."

The late Dr. Henderson, of Shanghai, contended, that the smoking of opium is a mode of employing the drug, which might well be taken advantage of by the physician, as its effects are far more promptly and efficiently produced than when taken into the stomach. It is specially applicable to such acute nervous disorders as spasms, angina, tetanus, hydrophobia, and it has this further recommendation, the effects of the drug in deranging the functions of the liver, stomach, and bowels, are reduced to a minimum!

A considerable, if not the chief part, of the narcotic principles are not volatilizable by the heat of the opium pipe. Smoking is therefore the least detrimental, because the most wasteful and self-limiting method of using the drug.

Dr. Richardson, on the contrary, asserts that opium when smoked exerts a more rapid and vehement action, that the excitement is more intense, the delirious torpor more prolonged, the after-depression

ciple passes into the lungs with the smoke, while the greater part remains behind in the pipe in the form of ash. Six grains of this ash, injected hypodermically, induced partial paralysis in a full-grown rabbit. There is no doubt in my mind that in opium smoking, 1st, it takes longer to form a real habit; 2nd, it works less physical and mental injury; and 3rd, it is much easier of cure.

more severe, and finally, that the ultimate destruction of nervous function is more ready and determinate.*

Assurance Societies will not accept the lives of opium eaters or opium smokers.

In any case, we conclude, bad is the best method of employing it—destructive of the general health and jeopardising in no common degree the chances of long life. Assurance Societies, doubtless, understand their business, and Mr. De Quincey notwithstanding, they are as decided as ever against accepting opium eaters and opium smokers. In reply to my inquiries on this subject, I received the following note from the Secretary of the Scottish Provincial Assurance Company:—"I do not know any Com-

* Dr. Allen, of Lowell, U.S., adopts Dr. Richardson's opinion, and states that the lungs offer so large and so delicate an absorbing surface, and so greatly is free oxygeuation of the blood interfered with, that the effects of opium-smoking must be greater than those from using the drug in any other way. But he fails to take into account the part played by the residual and tidal air, and while we admit that the method of inhalation (next to that of hypodermic injection) is the most *rapid* mode of influencing the system, it must be remembered *there is a limit to the amount capable of being taken into the system by inhalation*, inasmuch as, after a few deep insufflations, the nervous energies are overpowered and further inhalation is impossible. On the other hand, when a man swallows the drug, whether in the solid or liquid form, be it a grain or a drachm, an ounce or a pint, the whole is slowly but surely absorbed, the state of torpor or coma is indefinitely prolonged, and the foundation of dyspeptic derangements of the stomach and bowels and general emaciation is more surely laid. *Smoking is therefore the least deleterious, because the most wasteful and self-limiting method of using the drug.* Though physically less injurious, financially and perhaps morally also, the habit of opium smoking is more ruinous than that of opium eating.

pany in this country of any standing that would care to accept such a life as that of an habitual user of opium."

Does the use of opium fortify the system against malaria?

In the 6th place, the question must be asked, since it is constantly pleaded in extenuation of the custom of opium smoking in China: Is the use of opium medicinally helpful in ague and prophylactic against the disease?

Now the use and practice of the common people in the aguish districts of England, as in those of China, is in favour of opium, owing to a current belief that it tends to strengthen the frame against the malarious influence of a damp and unwholesome climate. That it is useful in steadying the nerves and tranquillizing the system *during an attack* is, as certain as anything can be, both from my own personal experience and the testimony of several medical friends, sufferers themselves from intermittent fever. It cannot be denied that so powerful a stimulant as opium may even enable the system to throw off the preliminary chill, and *so cut short the paroxysm*. Aguish attacks in the East are commonly regarded as the equivalent of "colds" in England, and just as a catarrh or an influenza may be nipped in the bud by a ℥xxx dose of laudanum taken at bedtime, so with almost equal certainty may an aguish attack. Its employment in this way is as old as Galen, but it was reintroduced in modern times by Dr. Trotter. If given *in the intermissions*, he says, it has not the least effect, either in preventing or mitigating the succeeding paroxysm, but, when administered shortly

after the commencement of the hot fit, it *abates the fit with more certainty than an ounce of bark*. It gives sensible relief to the head, takes off the burning heat of fever, and occasions a profuse sweat. Dropsy and diseases of the liver and spleen are thus rendered less likely. Dr. Joseph Brown, in the *Cyclopædia of Practical Medicine*, states that during the Peninsular war, so perfectly aware were the soldiers of the virtue of opium in cutting short the attacks of intermittent fever, that, on the first approach of the cold stage, they immediately applied for an "ague-draught," which consisted of 40 minims of tincture of opium, with 3 j. of ether. In the case of children, rubbing the spine with soap and opium liniment sufficed to arrest the attack.

In an article on intermittent fever, in the *British and Foreign Medico Chirurgical Review* for July, 1839, the editor quotes M. Bailey, to the effect that if opium *shortens the attacks, it does not prevent their recurrence*, and adds, "we have little doubt that there are cases in which opium mitigates the sufferings incidental to intermittents, and in some cases a large dose given in the cold stage, will put an end to it and even to the disease altogether."

Dr. Lind, the author of a work on fevers, and others, warmly advocated a full dose of opium, half-an-hour after the commencement of the hot stage, as affording present relief and mitigating the course of the disease. Other writers recommend the opium at the commencement of the cold stage, and Waring, in his *Manual of Therapeutics*, says he has found, by repeated trials, "that a full dose of XL minims given on the first appearance of the cold stage, often had the effect of *cutting it short almost like a charm*, and although it hardly seemed to shorten the subsequent

hot stage, it appeared at least to mitigate its severity. Any antiperiodic power possessed by opium is probably due to the narcotine it contains."

We should be inclined to think that no small part of the virtue of opium in aguish attacks was due to the steadying and quieting effect of the morphia, codeia, and other somniferous or hypnotic principles on the vascular and nervous systems, but there is undoubtedly very strong evidence in favour of the tonic and antiperiodic properties of the contained narcotine.

Opium contains principles possessing antiperiodic properties.

The researches and experiments of Sir William O'Shaugnessy, Dr. Balfour, and Dr. Garden, leave no doubt of its powers as an antiperiodic. The latter maintains that there is no remedy (quinine excepted) which cures intermittents so rapidly and surely, and the employment of which, in convalescence from febrile and inflammatory diseases of Eastern climates is attended by such excellent results. Waring endorses these views. Narcotine, more properly designated anarcotine, since there is nothing somnific in its properties, (Boeck's opinion, already quoted, differs from this: "Narcotine has the same properties," he says, as morphine, only in a less degree,") together with another principle chloro-codide possessing the bitterness of strychnia, is little inferior to quinine in controlling periodical or malarial fevers.

Boeck classes morphine, narcotine, narceine, and papaverine, together as essentially hypnotic, and capable of paralysing the nervous centres, while *thebaine* is said to act as an irritant, inducing, like

strychnia, tetanus and convulsions. It is contained, however, in opium, in such minute quantities as scarcely to modify the symptoms of opium poisoning.

Is opium a *prophylactic* also against ague? Alibert considers that the use of opium renders the body less *susceptible* to the influence of miasmatic and other morbid actions. Mr. Consul Winchester, himself a medical man, and speaking from an experience of 26 years in China, before a Select Committee of the House of Commons, attributes "the determined predilection of the Chinese for opium, to the malarious character of the country, and thinks that, if it could only be taken in moderation, the people would suffer less from fever and ague, and other affections arising from an unwholesome climate."

But if this be so, how comes it that the inhabitants of the non-malarious hilly districts both of India and China are almost equally addicted to the use of opium, and how does it happen that foreigners, who are certainly not less subject than the natives to attacks of intermittent fever, are never ordered to smoke opium by their medical advisers?

The popular mind finding benefit from the use of the drug *during an attack* would readily spring to the conclusion that the same remedy would be useful to protect them against recurrences of the malady, and *ward off the subtle influences which induce it*. Consul Swinhoe, speaking of the island of Hainan, says, "The Mandarin assured me that nearly every one smoked opium *to ward off the deadly malaria* that prevails in the island."

Dr. Russell, Surgeon in the Bengal Medical Service, says, "Malaria is a cause of opium eating, and the practice prevails *exclusively* among the inhabitants of plain regions and swampy malarious countries."

As a matter of fact, it is well known that the hill-tribes (Nagas, Kamtis, and Singphus) are all *habitual opium smokers*. Every man carries in his bag a little balance for weighing opium, and those who have travelled in the Singphu country find opium the only medium by which they can buy food, hire coolies or obtain permission to continue their journey.

Opium not prophylactic against malaria.

There is really no proof whatever that opium possesses *any prophylactic virtue against the ague*. Noxious agents would appear to be more powerful during sleep (Elliottson), in which the opium smoker passes a great portion of his time. Dr. Trotter's testimony will be re-echoed by all who have experimented on this subject, viz., that "opium, when given in the intermissions, has not the least effect either in preventing or even mitigating the succeeding paroxysm." If the Chinese employ the drug, as they probably do to some considerable extent, under the notion *that it fortifies the system and prevents them taking the ague*, it is an unfortunate and deplorable misconception. The only evidence in favour of the usefulness of opium is *during the actual attack*.

Dr. Dudgeon, of Peking, enters his protest against the supposed antagonism between ague and opium. "The determined predilection for this stimulant has been attributed to the malarious character of the country. Bnt ague is unknown in many of the provinces where opium smoking prevails, and opium smokers are not exempt from intermittent fever." Opium smoking prevails most in Southern China, where there is little malaria. It is an excuse invented and put forward by the Chinese themselves, and re-echoed by Europeans!

Use of woollen clothing recommended as some protection against malaria.

It is worthy of remark in this connexion, that the more general use of *woollen* instead of cotton clothing next the skin might do much to diminish the prevalence of intermittents and dysentery in China. It is not an unreasonable theory, maintained by Combe, Bichat, Brocchi, and others, that *Marsh-miasmata are absorbed by the skin*. Sir Geo. Ballingal and Sir J. W. McGregor have given the most striking evidence of the *utility of flannel* in checking fever, cholera, and dysentery in the British army. Being a bad conductor of heat, it prevents that of the body from being suddenly dissipated, and protects it from sudden vicissitudes of heat and cold, such as have to be encountered at certain seasons in China, and largely account for the prevalence of vernal and autumnal intermittents.

Drainage, irrigation, and arboriculture.

Efficient drainage* and irrigation of the soil, to—

The Fen-Country of England in the middle ages.

* Charles Kingsley speaks of the great Fen-country, southward of the "Wash," as it used to be in the middle ages, as an all but impassable peat-moss, traversed by sluggish rivers, and dotted here and there with green islets, the chief of which was Ely, the refuge of outlaws and marauders, and haunted with fevers and agues, which racked the inhabitants and wasted their lives. The picture reminds one of vast tracts in the great plain of Central China as they exist to-day. "That is all gone now! 2000 square miles of the finest corn-land in England have replaced mere and reed-bed, and the amphibious population of the Fen—'yellow-bellies,' as their neighbours of terra-firma contemptuously styled them" (that is, aguish subjects, with big livers and spleens and dropsical abdomens, such as may be met with by the score

gether with the planting of trees as screens against malaria, are matters of national consequence in their bearing on the public health. Timber is scarce in China, and the hills now bare that give evidence of having been once well clothed with wood. They are consequently inadequate to attract and condense moisture, and the streams and farms, and indeed the whole country, suffers by the improvidence of former generations in not planting young trees in proportion as they felled the old ones. The woodmen of the Leu-shan range, near Kew-Kiang, appear to have the most absolute freedom, to cut and carry away as often and as much as they will. One painful result is, that excepting within the immediate precincts of the temples, and not always even there, a fine tree is hardly to be seen !

How long must we cherish fruitless longings for the time, when well-directed human industry shall fairly measure swords with marsh-demons, flood-dragons, and the physical sources of preventible sickness and mortality which hold spell-bound, as if by enchantment, the unawakened strength and intelligence of this people ?

in the valley of the Yang-tsze)—“have become opulent and portly farmers.” The cultivation of the willow and the poplar, as fences or screens against malaria, is very general at all the Bunds and foreign settlements throughout China, but still better results are promised from the culture of the Eucalyptus or Australian Blue-Gum tree, of which the seeds have already been imported. In addition to its power of rapid growth and of absorbing moisture from damp sub-soils, it has the admirable property of constantly distilling into the atmosphere *peroxide of hydrogen*, which is a disinfectant, and *camphoric acid*, which is antiseptic. The tree is unfortunately easily killed by intense frost, but would flourish easily, we should think, in the climate of Middle and Southern China.

Does opium prevent consumption?

In the 7th place, Mr. De Quincey alleges that opium daily and systematically used intercepts the development of pulmonary consumption by keeping up the insensible perspiration. He quotes *himself* in proof of this remarkable position. He was pronounced *a likely* subject for the disease named by the Clifton physicians, being of eight children the one which most closely resembled his father in bodily conformation: his father dying of phthisis at the early age of 39! But De Quincey appears to have forgotten that the child takes the type of its constitution quite as often *after the mother*, and that he never showed more than a tendency or predisposition to the disease which thousands besides himself have outlived and overcome without the use of opium. Moreover, since threatened consumption is more than anything else a disease of defective nutrition and mal-assimilation, and opium notoriously interferes with the digestion of oils and fats, which are essential to the formation of healthy chyle, it may be safely asserted that no worse prescription could be given to *Poitrinaires* than a regimen including opium! Dr. Chambers, in his excellent work on Indigestion, states that the habitual use of opium impedes the digestion of meat and fat, and leads to wasting of the tissues. The after effects of a dose of opium are commonly headache, dry or foul tongue, glumpy, depressed feelings, and disagreeable taste in the mouth and disinclination for food, if not actual dyspeptic symptoms. Anorexia or dyspepsia, with headache and "*the glooms*," next set in, and with them progressive loss of flesh and tone and colour. Many persons, however, are not thus affected, but are able

to continue the moderate use of the drug for years, without suffering any distinct inconvenience in any part of their digestive system. It is well known, *e.g.*, that constipation is by no means one of the inconveniences complained of by opium eaters! so completely does daily use alter the effect and create a *tolerance* of the remedy! In time, however, as Sir B. Brodie contends, the use of opium destroys the healthy action of the digestive organs: they work feebly with and absolutely strike work in the absence of the wonted stimulant.

Dr. Oppenheim says the digestive organs are in the highest degree disturbed, the sufferer eats scarcely anything, and that only the most dainty food, growing daily more haggard and emaciated: his mental and bodily powers are destroyed: *he is impotent*. A total attenuation of body, a withered yellow countenance attest the habitual opium smoker. Even in the case of patients in advanced consumption where opium or one of its salts requires to be administered for the relief of the harassing cough, we find it necessary to give it guardedly and in combination, for fear of taking away what little appetite remains to them.

Opium cannot prevent consumption, since it causes an arrest of nutrition!

M. Pecholier asserts that opium diminishes all the secretions, excepting the cutaneous, that at the same time nutrition becomes less active, there being, according to the graphic expression of this investigator, a *catelepsy or arrest of nutrition*. If even a moderate dose be taken shortly after a full meal, it wholly or partially arrests digestion, flatulence, a squeamish feeling and unpleasant eructations come on, and often digestion is brought to a complete

standstill, and there is no comfort until the whole contents of the stomach are rejected after some hours. Foul, dry tongue, headache, and lassitude, with constipated bowels, are the common after-effects.

It arrests all the secretions except that of the skin.

A dose of opium will promptly cure an otherwise troublesome catarrh, cough, or influenza, if taken at the outset, by producing a three-fold effect. 1st, soothing the nerves locally irritated, and so preventing the system sympathizing. 2nd, promoting general perspiration, so that the local trouble is as it were obliterated and relieved by the systemic diaphoresis. 3rd, by antagonising the tendency to flux from the Schneiderian membrane—all the secretions, that from the skin excepted—undergoing inspissation or retardation. Dr. Young, as early as 1800, asserts that opium infallibly thickens all the liquors in the mouth, nose, and trachea, while the body becomes costive, the tongue parched, and the urine concentrated and high coloured. “Every secretion,” he says, “is retarded, thickened, or diminished, except the perspiration.”

This is equally true of the *seminal* as of the other secretions, as several experimenters with opium have confidently assured me. It probably increases or prolongs the orgasm, but all secretion seems arrested; no semen is forthcoming, and the act, though prolonged over an hour or more, is never completed by the ejaculation of semen.

Sterility an undoubted result of opium smoking.

It is therefore a perfectly credible and likely thing that opium smokers should be commonly childless. “Opium smoking,” says the Rev. J. John, of Han-

know, "affects the population by inducing sterility. The excessive use of the drug for three or four years deprives the victim of the power of procreation (*liberos procreare*)."

Sir Astley Cooper says: "When opium is taken in considerable doses for any length of time, it diminishes the virile power and the disposition to sexual intercourse. I have known several instances of its producing this last effect. We read, indeed, that the Turks are in the habit of taking opium for the purpose of increasing the propensity to indulge in sexual intercourse: but, as far as I have had an opportunity of judging of this fact, opium produces quite an opposite effect. A gentleman who had taken opium very freely for the sake of the exhilarating effects it *at first produced*, told me that for a long time he had suffered no inconvenience from it, but that though a married man, he never felt the slightest disposition to sexual intercourse. Another who had taken opium in large quantities for a period of two years for pains in the bowels, declared that he had never the least inclination for amatory indulgences."

Dr. Dudgeon says, "One of the evil results of opium smoking is, sooner or later, complete loss of virile power, coupled with distressing spermatorrhœa." Dr. Collins writes, "with regard to the depopulating influence of this vice, the Chinese all agree that the family of the opium smoker will be extinct in the third generation at latest. When a man smokes his son very generally smokes also, and begins at an earlier age than his father did, so that if the son be not *childless, as is often the case*, his children are born with feeble constitutions and die prematurely."

Calkins has shown that the population of China shows a steadily decreasing ratio since the introduc-

tion of opium. From 1711 to 1753 the annual advance was at the rate of 6 per cent.: from 1753 to 1792 it was only about $2\frac{1}{2}$ per cent.: and from 1792 to 1812 the increase was not quite 1 per cent.!

Is opium a food stimulant?

In the eighth place, can the proposition of Dr. Anstie be entertained, that opium in moderate doses, like alcohol, hashish, coca, tobacco, tea, and coffee, *is a food stimulant or food substitute?*

The support of the organism in the absence of ordinary food by *stimulants*, is one of the most remarkable phenomena which can be offered to the attention of the physiologist. It has been assumed that because in *large doses* these substances act as *narcotics*, that in *small doses* they must act, *not as foods*, but by inducing a low degree of vitality from partially arresting tissue-changes.

Coca, the great Peruvian narcotic stimulant, when taken in moderation by South American Indians, or even by foreigners resident in the country, enables the taker to perform the most severe physical tasks upon an extremely small allowance of common food, and this without any evil after-effects. Examples are given of the most prolonged and exhausting labour, sustained for days continuously without sleep solely by chewing the coca-leaf. The true *narcotic action* is quite a different thing, and the effects of excess are said to be quite as lamentable as anything arising from excess in alcohol or opium.

Next to coca in its power of replacing or compensating, to a certain extent, the want of food stands *tobacco*. How often one hears a man make the statement that "he would rather go without his dinner than his pipe," yet tobacco at best can form

but an indifferent substitute for roast beef. It not only deadens the hungry sensibility of the nerves of the stomach, it exerts a general soothing, calmative power over the nervous system which resembles the warming satisfying effect of a full meal. But how? Yet this very tobacco is a deadly narcotic if unskillfully used, depressing the nervous energies to the lowest point, and stopping the heart's action in fatal syncope!

Mr. A. W. Douthwaite, Surgeon to a Hospital for natives, Wenchau, China, says, "A man may take a little beer, wine, or spirits every day for years, and even if he derives no benefit from them, they will not impair his health so long as they are taken in moderation, and whenever he wishes to give them up, he can do so without much difficulty. But let him smoke ever so small a quantity of opium regularly every day for two or three months, and then try to break off the habit: he will find himself in the clutch of a demon over whom he has no power, and whose grip tightens every time the fatal pipe is put to his lips."

Alcohol differs from opium in being, in part at least, assimilated and generating force of some kind, and in being much more easily renounced.

Alcohol again has notoriously the power of greatly *prolonging life* beyond the period at which it must cease if no nourishment, or water only, had been given: in acute diseases, it both supports life and keeps up the bulk of the body during many days of abstinence from food! In some instances persons have supported themselves, in the absence of all food, on spirit and water for years! All this, Dr. Anstie contends, is clear proof of the *alimentary character of alcohol*. We may be at a loss to explain

the chemistry of its action, but we may very safely say, that in some measure it acts as a food.* In the same way it may be shown that tea and coffee must be credited with a *food-action* on the organism and of playing a *rôle* especially nutritive or sustaining *quoad* the nervous system.

Leaving aside the abuse of opium by orientals, *its use*, he contends, is *an important and genuine one*. It acts as a powerful food-stimulant, enabling the taker to undergo severe and continuous physical exertion without the assistance of ordinary food, or only short rations of the same, a fact to which numerous tra-

* It would appear from the carefully compiled statistics of Dr. Sutton, that the liability of alcohol drinkers to the ordinary forms of phthisis is considerably less than that of temperate people and teetotallers, though cases of "galloping consumption" in drunkards are not unknown. But even if this were proved, it would be no argument for the *use of opium* as a preventative of phthisis, inasmuch as alcohol acts as a food is partially at least oxidised within the system and gives up *something to supply bodily loss*. Opium, on the other hand, lowers the nutrient activity and gives up nothing which can either support combustion or form tissue. "*Ex nihilo nihil fit.*" "The balance of evidence is strongly in favour of the belief that a considerable portion of every dose of alcohol does undergo oxidation in the system." Anstie on alcoholism in "Reynolds' System of Medicine."

Both opium and alcohol have the power of enabling men to go through much labour and fatigue of the most exhausting kind, without for the time feeling its effects. Both dull sensation and lower all forms of vital activity, and retard or diminish tissue-changes. Both may be useful in promoting the action of the cutaneous capillaries and diverting the blood from the *portal* system, and hence may be useful in malarious countries, but *the place and power of the two are not identical*. Since all the alcohol taken is not eliminated as alcohol, if it undergoes any chemical change at all, the change must be of such a nature *as to develop force in some form*.

vellers testify. During the wars of Napoleon, the surgeons of the French army were in the practice of administering opium and cayenne pepper to the soldiers when exhausted by fatigue (Paris).

Various authorities quoted and contrary opinions stated as to the place and power of opium.

Dr. Barnes relates a striking instance of its powers to recruit the exhausted frame. "After a fatiguing night march and a journey of 30 miles next day, I was obliged to assent to a halt of a few minutes, which my companion, a Cutchie horseman, employed in sharing a quantity of opium, some two drachms, between himself and his jaded horse. The remainder of the journey was finished with great facility, and the rider became absolutely more active and intelligent." Dr. Barnes declares that moderate opium eating *does not appear to shorten life or decrease vigour*, an opinion shared by a certain number of authorities. Dr. Eatwell says, that the health of the workmen in the opium factories is quite up to the average standard, and that the effect of the habitual use of the drug on the mass of the people in China *is not visibly injurious*. Mr. Giles, of H.B.M.'s Consular Service, is inclined to make light of opium smoking, considering it to be not nearly so pernicious a habit as that of gin-drinking in England. Murray and Crauford, in their "Historical Account of China," say, "with respect to the deleterious quality of the drug, we consider this opinion *to be a mere prejudice*: for opium, when taken in moderation, seems in no respect more pernicious than ardent spirits, malt liquors, or any other intoxicating beverage."*

* Deputy-Surgeon General J. W. Moore to the same effect in the "Indian Medical Gazette," 1880.

The opinion of Sir R. Alcock, already quoted, is more weighty and not less emphatic *on the other side*. To this may be added that of Sir Thos. Wade, K.C.B., British Minister at Peking, which has the advantage of being more recent and drawn from a far wider field of experience than Messrs. Murray and Carnford's opinion. "I cannot endorse the opinion of Messrs. Jardine, Matheson and Co., that the use of opium is not a curse, but a comfort and a benefit, to the hard-working Chinese. The habit of opium smoking is *many times more pernicious* than the gin and whiskey drinking which we deplore at home. *I know of no case of radical cure!*"

Sir Charles Beadon declares that the population of Assam is almost entirely demoralised by opium. And the famous declaration of the Directors of the East India Company, put on record in 1817, may be quoted against all the petty advocates of opium indulgence. "*Were it possible to prevent the use of the drug altogether, we would gladly do it in compassion to mankind.*" Dr. Porter Smith, of Hankow, says, "the vice of opium smoking as practised here, cannot be pictured with the horrors frequently said to attend it. Half-a-drachm or a drachm of the prepared extract is the average quantity consumed, and except for their own voluntary admission, they would not, from their looks, be taken for opium smokers. The smoking is carried on morning and evening at the opium shops. Temporary depression in trade or loss of fortune was the reason commonly given for seeking the foreign doctor's assistance, and we are assured that a great deal of hypocrisy and duplicity were practised at our expense." "The custom is both more generally practised and *less hurtfully in-*

dulged in by a larger-number of persons than is generally supposed."

It has been contended that all nations of men, in all ages of the world, have solaced themselves with one intoxicant or another, and that since the Chinese prefer opium, they may be allowed their choice. But, as Dr. Gould has well shown, the Chinese have never been shut up to the necessity of fixing on opium, inasmuch as for ages they have had their tea, tobacco, and fiery, intoxicating spirituous liquors, made from rice and millet. Excessive indulgence in either spirits or tobacco is by no means common in China, excepting in the case of the opium smoker who will commonly be found, so Dr. Gould asserts, a tobacco smoker and spirit-drinker as well. As to the morality and other effects of opium smoking, T. T. Meadows thus expresses himself: "Smoking a little opium is like taking a pint or two of ale or a few glasses of wine daily. Smoking more opium is like taking brandy as well as beer or wine, and a large allowance of these latter. Smoking very much opium is like excessive brandy and gin drinking, leading to *delirium tremens* and *premature death*. I can see no difference as to the morality of producing, selling and consuming these two articles, and in respect of the consequences of consumption, the difference is *in favour of the opium smoker*, who is not so violent, maudlin, and disgusting as the drunkard. The clothes and breath of the confirmed smoker are more or less marked by the peculiar penetrating odour of opium, and he gets careless in time of washing from his hands the stains received from the pipe. But all this is not more disagreeable than the beery, vinous, or ginny odour, and the want of cleanliness which characterises the confirmed drunkard.

In all other respects the contrast is to the disadvantage of the drunkard."

Sir W. O'Shaughnessy also, while drawing a sufficiently painful picture of opium smoking when carried to excess, says, "when the habit is but moderately followed, it appears to occasion no *greater evil than a proportionate indulgence in wine or other spirituous liquors.*"

The best that can be said is, that opium smoking is not worse than dram drinking!

Dr. Headlam says, "the results of opium smoking may be compared with those of smoking tobacco to excess: that it is not so deleterious as some have affirmed: that it is *not so prejudicial to the health as the practice of spirit drinking*, and that it seldom or never causes premature death."

Dr. Anstie says the bulk of opium consumers in this country use it *not* as a means of luxurious debauch, but simply as a *soothing stimulant* to remove the traces of fatigue and depression; one, two, or three drachms of laudanum being the daily allowance, without variation, for many years. He thinks the majority of such persons would never think of *narcotising* themselves with laudanum any more than they would think of getting drunk, and he believes its action in such cases is inexplicable, except on the supposition that it exerts a kind of *food-stimulant effect*. Vast numbers of orientals undoubtedly smoke opium in like moderation, and with similar results—temporary solace and invigoration, and the explanation may be, as Dr. Anstie says, that it acts as a *food-stimulant or food-substitute*.

After prolonged consideration of the conflicting evidence as to the effects of opium, I have come to

the conclusion that there is much truth in Dr. Anstie's opinion, viz.: that the substance is used by thousands upon thousands in India and China, much in the same way as alcoholic beverages are with us, that is, *as a soothing stimulant, a calmative and restorative*, and without any or scarcely any appreciable interference with the general health, it may be for a long time—an opinion nevertheless perfectly compatible with a belief in the terrible fascination of the indulgence and its innumerable sinister effects upon the health and the morals of the minority in course of time.

This view is put forward by Dr. Myers, of Takow, as the result of his large experience in the island of Formosa, who says that his preconceived prejudices with reference to the universally baneful effects of the drug have been severely shaken. He alleges that the great bulk of the coolie and labouring class are content with the same quantity for years together, seldom varying it or increasing it, and that he failed to obtain evidence which would justify him in attributing any marked harm to the habit. Leaving on one side as being extremists, the opinions of such men as Sir Geo. Birdwood and Dep. Surgeon General Moore, that of Dr. Ayres, of Hong-Kong, may be quoted to the effect that the habit does no harm in moderation, that of Dr. Porter Smith, that in nine cases out of ten observed by him at Hankow, you would not know them to be opium smokers but for their own voluntary admission, and that of Dr. Geo. Thin, who found every single servant at the Shanghai Club to be an opium smoker, yet the business of the club was carried on in an exemplary way, and the smokers were never found incompetent for business. Emaciation in some cases appeared to be

the only ill effect, physical or moral. Finally, I may adduce the evidence of Mr. Lely, a member of the Indian Civil Service, who has spent some years of his life among the Rajpoots and other hill tribes of Gujerat and Katticewar, and has seen a good deal of the custom of drinking kasumba or opium-emulsion. He declares these people to be amongst the finest in India, and in the great majority of cases to be none the worse for the indulgence, so far as he could judge.

He goes on to say, "I have never given much specific attention to the custom, and for a plain reason. It creates no alarm in India, such as it is said to do in China, and therefore one's attention is seldom called to it. What does cause an outcry from the educated and more moral classes through the native press and otherwise, is the spread of drink. Government is constantly being abused for not checking that with a stronger hand, but I do not remember a single instance of complaint with reference to opium."

Dr. Palmer, of Louisville University, asserts, however, *that no debate as to the food-properties of opium can be held.* It is simply a powerful drug, useful in times of great physical distress, *but pernicious beyond the power of pen to portray*, when once it fastens itself upon the mortal frame as a daily necessity.

But while this controverted opinion deserves to be stated, and may perhaps help to explain some of the singularly varied and even contrasted results obtained from the use of the drug, it in no way excuses the practice or removes the danger which besets the path of the opium smoker from the moment he commences dallying with the opium pipe—the danger, namely, which arises from the fascinating influence of the drug, and the necessity for constantly

increasing the dose to maintain the effect. From one grain he goes on to one drachm, along a terrible and slippery incline, which in this world has no end ! It would seem that the more any substance (stimulant) is removed from the category of those things which constitute "human nature's daily food," the more fascinating and indispensable does the use of that substance become when once indulged in.

*The more unlike food the substance used, the more ingratiated with the constitution the habit becomes,—
"bone of one's bone !"*

Tea and coffee are not exactly *food*, but with the usual addition of milk and sugar, they become *almost such*, and one can renounce their employment without much difficulty.

Wines and spirits are more artificially produced and less commonly used as food or with food—the taste is an acquired one—yet they are more decidedly missed when denied, and their use is renounced with difficulty !

The practice of smoking tobacco is a disgusting and painful one to acquire, and the inhalation of the fumes of a burning substance which makes the novice sick and giddy is, to say the least, unnatural, yet there are few habits to which men cling with such tenacity, or which they miss more when it is interrupted !

Finally opium, whether inhaled in fumes or swallowed in substance, is still more removed from the category of "foods" and necessary aliments—its proper place, and it is an elevated one, is in the physician's armoury : yet when, with the strange perversity which characterises man, it is taken from occasional and extraordinary into trivial and daily

use, it more than all other substances becomes a *want, a need and habit of the body*, part and parcel of the man's existence, so that, to escape from its thralldom, if escape he can, involves sufferings comparable only with the tortures of the rack!

The victims of the opium-smoking habit have seldom any genuine desire to escape from their bondage.

Perhaps the most deplorable feature of all is, that notwithstanding the numbers which apply for the cure of the opium-habit at the various Mission Hospitals, the *victims have seldom any proper desire to shake it off.** The vast majority apply not with the laudable desire of conquering a degrading habit, but because

* De Quincey's and Coleridge's lives exemplify this truth in a remarkable manner. "Shocking as his letters are," writes Cottle of Coleridge, "perhaps the most mournful thing they discover is, that while acknowledging the guilt of the habit *he imputes it still to morbid bodily causes*, whereas after every possible allowance is made for these, every person who has witnessed his habits, knows that for the greater, infinitely the greater part, *inclination and indulgence are its motives*. The Morgans did break him of the habit, and he recovered in consequence health and spirits, at a time when his ordinary consumption of laudanum was from two quarts a week to a pint a day! To what was his relapse owing? I believe to this cause—that no use was made of renewed health and spirits; the time was passed in idleness and neglect of duties, and then relief was sought for a self-accusing mind in bodily feelings, which when the stimulus ceased to act, added only to the load of self-accusation. Unquestionably, restraint would do as much for him, as it did when the Morgans tried it, but I do not see the slightest reason for believing it would be more permanent. The restraint which alone could effectually cure is that which no person can impose upon him. Could he be compelled to a certain quantity of labour, every day, for his family, the pleasure of having done it would make his heart glad, and the sane mind would make the body whole. He leaves his family to chance

of their present poverty and inability to purchase the drug, *for something to stop the craving till times improve with them.* Hence the painful consciousness is forced upon us that the majority of the applicants, even many whom we fondly believed to be cured, will resume the pipe when they are better off:—

“rendered ten-fold dearer by the power
of intermitted custom.”

“There is *no slavery on earth*,” says an eye-witness of the custom as practised in Batavia, “to compare with the bondage into which opium casts its victims.”

Dr. Collins, of Pekin, contends “that opium cannot be classed with alcohol and tobacco as all *only equally injurious* to the human constitution, and one not more than another, without discrediting our own powers of observation. The use of tobacco is universal throughout China, among all classes, and is always regarded as harmless. The use of ardent spirits is also very general in the northern provinces, and is condemned only in cases of excess, which rarely occur. Opium, on the other hand, is *condemned as baneful, and regarded as a vice in whatever degree it is indulged in*, by all Chinamen, and by none more loudly than by its victims. Opium smokers are excluded from Christian communion, and this with the approbation of the native converts, which is not done in the case of the moderate spirit drinker and tobacco smoker.”

and charity. He never writes and never opens a letter from them. In one of his letters he says, “I have had more than a glimpse of what is meant by death and outer darkness, and the worm that dieth not, and the hell of the reprobate.” In another he extols the skill of the surgeon in having lessened his consumption of landanum to 20 drops a day, while, such was his duplicity and self-deception, he was surreptitiously indulging in overwhelming quantities of opium.

The British officials in India and China and the opium merchants are constantly asserting that the smoking of opium does not injure the health of the Chinese, and lately there has been a good deal of writing in the *Times* in support of this view. But the great complaint and real objection of the governing classes and people of China to opium has been hardly noticed, viz., that it *injures the intellect and impairs the moral character*, which may be quite compatible, for a time at least, with an external appearance of health. The proverbial steady industry and application of the Chinese is adduced by Dr. Murrell as proof that the use of opium is not incompatible with all the virtues, just as if anyone argued immediate destruction of the active powers by the incipient use of opium, or as if there were not margin enough for a few millions more or less of hopeless opium debauchees in a nation numbering possibly from three to four hundred millions.

Far more ensnaring and seductive than dram drinking!

Dr. Collins continues: "The practice of opium smoking is far more ensnaring and insidious than that of dram drinking. Children are often warned by the revolting exhibition of drunkenness in parents, whereas opium is smoked decorously in the bosom of the family, as well as in the opium den, and thus wife, children, and friends are often drawn into the fatal gulf. *I have heard none palliate the use of opium but those interested in its consumption.*"

Engenders intense selfishness, and renders the moral character wholly unreliable!

The moral effects of opium smoking are most evident in the *intense selfishness* which it engenders;

though in this respect we should think the passion for strong drink almost, if not quite, as demoralising. Its victim is dead to the voice of nature, the gratification of his morbid appetite becomes the controlling motive of his life, and he will sacrifice his wife and even his children to the necessities of the vice. I know men whose families are dependent on the charity of others, while they are destroying themselves by smoking *what* would maintain themselves and their families in comfort. As a rule, no one thinks of trusting to the word of an opium smoker: his *character is wholly unreliable*.* Coleridge confessed that worse than the constant sense of wretchedness, restlessness, and pain, engendered by this subtle species of intemperance, was the sense of blighted utility and remorse at the lamentably imperfect use he made of his great powers. Procrastination became a marked feature of his daily life. Nobody who knew him ever thought of depending on any appointment he might make. As to letters, he tossed them all into one general *dead-letter bureau*, and rarely opened them at all. With good feelings, good principles, as far as the understanding is concerned, and an intellect as powerful as was ever vouchsafed to man, he was a

* Opium makes the best memory treacherous, and the most truthful nature, in matters relating to the habit at least, untrustworthy. During periods of great effort or excitement, the opium-eater will take doses of the drug which he does not recollect an hour afterwards, and in this way overrun his supposed weekly allowance, as much as forty or fifty per cent. And not only the sense of veracity, but his merciful, humane, and sympathetic feelings, undergo a *bouleversement*, so that he becomes stolid and indifferent as a Turk in the presence of human suffering.

slave of degrading sensuality and the victim of a specific madness.

How does opium kill ?

Before addressing ourselves directly to the question of the medical means for counteracting the effects of opium smoking, it is necessary to consider briefly—1st, in what way large narcotic doses of opium cause death ; and 2nd, in what way the moderate use of the drug injures the general health.

Death comes about by oppression of the respiration—apnœa and reduction of temperature. Opium is a respiratory depressant.

Opium and its derivative morphia act upon all the nerve centres, but they act especially upon the respiration. Death occurs from opium in the great majority of cases by failure of the respiration, and that such failure is due to a direct action of the poison upon the respiratory centres in the medulla is proved by the fact that morphia affects the breathing of dogs and rabbits, whose pneumogastrics have been cut, as much as it does those whose nerves are entire (Gsheidlen).

M. Chossat's experiments on the influence of the nervous system on animal heat, conclusively show that large doses of opium are equal in their effects to section of the brain or concussion in causing *reduction of temperature*, the animal rapidly dying of cold. While lethal doses of opium therefore paralyse the entire sensorium and the respiratory centres and occasion a fatal reduction of temperature, in a few cases death takes place with convulsions, and in others with sudden and extensive cerebral effusion or

hemorrhage, with apopleptic symptoms. Nothing can save the patient in such a case, death takes place within a few minutes, its approach being heralded by a sudden flashing open of the pupils, heretofore contracted to a pin's point, a swollen congested appearance of the face and scalp, and the discharge of a frothy sero-sanguineous fluid from the nostrils.

Forty or fifty cases of attempted suicide by opium are annually seen at the Native Hospital in Shanghai, of which 1-4th are fatal. The watery extract used for smoking is the form commonly taken in quantities varying from two drachms to one ounce.

To maintain the respiration is the ultimate object of all the measures which are commonly undertaken for arousing the system in opium poisoning. Unconsciousness supervening, reflex action ceases, and the sensibility of the respiratory centres being overcome, the involuntary breathing is less rapidly and perfectly performed, until it ceases altogether. Then cardiac action is also brought to a standstill, the circulation waiting on the respiration, which is the first to fail. Opium and chloral belong to the class of agents which paralyse both the nervous system generally and the rhythmically-discharging centres especially.

Belladonna, Strychnia, and Ammonia are respiratory stimulants and antidotal in opium poisoning.

"There can exist no longer any doubt," says Fothergill, "that we possess in atropia, strychnia, and ammonia most powerful means for acting on the respiratory centres, when these are paralysed by toxic agents. We may classify *opium and chloral*

*amongst respiratory depressants: belladonna, strychnia, and ammonia as respiratory stimulants.**

The potency of belladonna and its active principle atropia in preserving life when threatened by failure of the respiration in cases of opium-poisoning is sufficiently attested. It was in the winter of 1860, when acting as House Physician under Dr. W. T. Gairdner in the Edinburgh Royal Infirmary that I first ventured to try the effects of atropine, hypodermically injected, in an alarming case of opium poisoning. The man, æt. 50, an emaciated subject and long a sufferer from chronic perforating ulcer of the stomach (as was verified *post mortem*), had been comatose for several hours, and gave no response to all the ordinary measures. Death seemed imminent, and we determined on the injection of the atropia in 1-6th grain doses. The effect was such as to excite our highest hopes. It was manifested in gradual dilatation of the pupil, increased warmth and glow of the general surface, steadying of the respiration and reduction of the pulse-rate. The improvement unfortunately went no further, for he died of exhaustion in the course of the night, but the impression made on my mind by the experiment was so favourable that I resolved to try it in other cases of opium poisoning, which I have done with the happiest result in several cases. The truly *antidotal virtue* of belladonna in opium-poisoning was never better illustrated than in a case published in Guy's Hospital reports for December, 1865, by Dr. A. S. Taylor. A girl was brought to the Hospital *two and a-half hours*

* While *opium retards* the respiratory movements and the heart's action, *belladonna increases* the depth and frequency of the respiratory movements, and produces excitation of the cardiac ganglia.—*Fothergill*,

after having swallowed *an ounce and a-half of laudanum* by mistake for a black draught. She was in a state of deep coma, the use of the stomach pump, injections of strong coffee, &c., &c., having failed to arouse her. As a last resource galvanism was applied, and by its means she was forced to swallow 16 *grains of extract of belladonna* in divided doses during three hours. Shortly after its administration the improvement began, within six hours she could be roused to comprehension, and quite recovered in the course of the day. What is most remarkable in this case is, that *none of the symptoms of belladonna poisoning were exhibited*, thus proving that belladonna acts as a *perfect antidote to opium*, spending its force in neutralizing the opium and not in affecting the nervous system as it would have done but for the presence of opium in the blood and nervous centres.

Illustrations of the salvability of lives in opium-poisoning by means of Belladonna.

The late Professor Bennett and the Edinburgh Committee appointed to investigate this subject, clearly demonstrated by direct experiment on dogs that "as regards the toxic effects on the cerebral organs, *the two agents are mutually antidotal.*" Dr. Johnston, Medical Officer to the Naval Hospital, Shanghai, has had experience of 300 cases and upwards of opium-poisoning, chiefly with a view to suicide, and he declares that when the ordinary treatment by emetics, stomach pump, cold douche, galvanism, artificial respiration, stimulants, coffee, &c., &c., fail, and profound coma sets in, there is no remedy equal to atropia sulphate, hypodermically injected in $\frac{1}{4}$ or $\frac{1}{2}$ grain doses, repeated at intervals, until the pupil dilates, the face and general surface flushes

and warms, and the breathing becomes tranquil and steady. "Administer atropine," says Dr. Johnston, "and the effects are marvellous, the pupils dilate, the face becomes flushed, the respiration loses its stertorous character, and becomes slow and tranquil, the pulse becomes slower and stronger, the patient slumbers peacefully for several hours, and at last wakes up conscious," having literally passed from death to life.

Dr. Eddison, Physician to the Leeds Infirmary, has published in the *Lancet* for June, 1879, an interesting case of opium-poisoning successfully treated by the subcutaneous injection of atropine, and many scattered cases of a like character could be collected from the pages of the medical journals, but this would be a work of supererogation, as the point is quite sufficiently established. Dr. John Harley, in his work on "The old vegetable neurotics," puts forward the opinion that larger doses than $\frac{1}{96}$ of a grain of atropine should not be administered, as more than this is apt to exert a depressant and narcotising influence. But this fear is groundless; I have myself administered $\frac{1}{10}$ and $\frac{1}{6}$ of a grain successfully, and Dr. Johnston, of Shanghai, has been eminently successful with $\frac{1}{4}$ and $\frac{1}{2}$ grain doses.* Such facts as

Summary of the Antagonistic Effects of Morphia and Belladonna.

* Morphia and atropine, says Dr. Roberts Bartholow in *Medical Record* for Nov. 27, 1880, are antagonistic in their effects on the *cerebrum*, on the *pupil*, on the *heart*, on the *respiration*, on the *arterial tension*, opium slowing the heart and paralysing the arterioles, atropia counteracting these effects. Atropia prevents to a large extent the depression, cold sweating and cerebral nausea caused by morphia. They are antagonistic in their action on the *kidney*, the one diminishing, the other

these sufficiently dispose of the extraordinary statement made by Dr. Anstie in his work on stimulants and narcotics :—"That the general poisonous action of one narcotic can remedy the general poisonous action of another, appears extremely improbable, and should be rejected till there is *some better evidence of it* than we at present possess."

That "*better evidence*" has just been given !

Antidotal effects of Strychnia in Opium-poisoning.

The *antidotal effects of strychnia in opium-poisoning*, though less known, are not less pronounced than those of atropia. The experiments of Mavor, published in the *Lancet* for December, 1871, and Jan., 1872, clearly demonstrated the antagonistic or mutually counteractive influence of these agents in the case of *dogs and rabbits*. So far as I know, the author of this essay was the first to employ strychnia to counteract the influence of poisonous doses of opium *in the human subject*. Three cases of opium-poisoning, in which the employment of strychnia was perfectly successful, were published by me in the *Medical Reports and Customs Gazette* for March, 1872 (published at Shanghai by order of the Inspector General of Customs for China).

increasing, the urinary discharge. In therapeutics the antagonistic actions may be utilized to secure effects which cannot be obtained by the employment of either agent alone. The whole subject affords a beautiful example of the success of the methods employed by modern pharmacological research to improve our knowledge of the actions of the oldest remedies, and to increase the safety, certainty, and range of their applications to the treatment of disease. There would seem to be a point, however, it must be confessed, where the functions of the nervous system, overwhelmed or exhausted by the influence of the one, fail to respond to the antagonistic stimulus supplied by the other agent.

Illustrations.

The first was the case of a young man, æt. 28, in the habit of smoking a mace of the prepared extract of opium daily. On account of a family quarrel, he swallowed at 10 a.m. on Feb. 22 *half a tael weight* of native crude opium, and was brought to the surgery three hours and a half afterwards, half-walking, half-carried between two men. The face was puffy, the pupils contracted, the pulse quickened beyond 100, hands hot, but general surface cold, still conscious. The preservation of consciousness at so long an interval after swallowing such a colossal dose, is to be attributed to the fact that habit had rendered him more or less *proof* against the narcotic action of the drug. Once he vomited slightly, but emetics of mustard and sulphate of zinc had no effect in re-inducing vomiting, nor did the stomach pump withdraw anything possessing the odour of opium. Intolerable thirst set in, and by three p.m. the pupils had become contracted to pin-points, the surface was extremely cold, the pulse failing, the respiration slow and stertorous, and consciousness completely suspended.

I now administered $\frac{1}{8}$ of a grain of strychnia in solution as a draught, and repeated the dose within half-an-hour. This brought on free vomiting of sedimentary looking stuff, mixed with mucus, which had the appearance of opium. At 4 p.m. I gave him another dose of the strychnia, which again excited vomiting. One of the most constant effects of the strychnia seemed to be its power of imparting tone to the muscular coats of the stomach, so that its contents are rejected with violence! At 5 p.m. the skin was perceptibly warmer; a fourth dose was

administered. At 8 p.m. the pupils, though still contracted, began to respond to the stimulus of light, he was less drowsy, and could answer questions. At 10 p.m. he was found sitting up in bed with a pulse and respiration almost natural, in a kind of reverie, but not asleep. He passed the night in this state, and walked home at an early hour the following morning, quite well.

The second case was that of a young woman, æt. 21, not an opium smoker, who, having quarrelled with her husband, swallowed three mace of crude opium, at 6 p.m., April 16th. She was brought to me at 7 p.m., ghastly pale, with contracted pupils, and a strong inclination to sleep. Emetics took effect, and I was strongly tempted to watch this case and trust to the mere effects of stimulation of the organs of sense and the powers of the constitution to throw off the poison. At 9.30 p.m. a marked change for the worse took place. There was marked sinking of the pulse and respiration, together with cold sweats and cadaverous pallor of the countenance. I thereupon gave her $\frac{1}{8}$ of a grain of strychnia, a second dose at 10 p.m., and a third at 11 p.m. By 11.15 p.m. the pulse had recovered tone and the skin warmth, the cold perspirations ceased, and the patient seemed brighter and more intelligent. The good effects were sufficiently apparent within an hour or an hour and a half. There was still some slowness in the mental operations, and she tottered from side to side, like one drunk, when required to get up and walk. By 12 p.m. she could walk unaided across the floor, and the contracted state of the pupils began to give way. I then sent her home in a chair. She was reported to have slept till daylight as usual, not any later, and, excepting for a painful dyspeptic

feeling, to be not much the worse for her attempt on her own life.

The third case was that of the son of a tea merchant at Kew-Kiang, æt. 17, recently married, who swallowed between five and six mace of prepared extract, dissolved in "samshoo," to spite his father. He had fortunately eaten a large meal of rice and vegetables shortly before swallowing the drug, and was brought to my surgery within two hours or so of the transaction, with contracted pupils, tumid belly, cold extremities, quickened pulse, complaining of great uneasiness in the region of the stomach from complete arrest of digestion by the opium and the formation of irritant acids and gases in consequence. I immediately caused him to swallow $\frac{1}{8}$ of a grain of strychnia solution, which caused prompt and forcible evacuation of the entire contents of the stomach. A further dose, an hour later, constituted the whole of the treatment. His recovery was as prompt and satisfactory as could be desired: he had *not even the long sleep* which forms the usual finale in cases of recovery.

Effect of strychnia in exciting vomiting in cases of opium-poisoning!

The effect of strychnia in *readily exciting vomiting*, after the failure of the most powerful emetics, is altogether remarkable! Sir Astley Cooper, in his lectures on poisons (*Lancet* for 1823-4), well remarks that "when the esophagus has lost its functions, which it soon does, from the influence of opium, no stimulating substance will produce the least effect upon it." In the case of a young lady who had taken opium, and where vomiting could not be ex-

cited nor the stomach pump used (not having been then discovered), he says, "It was lamentable for me to have to sit, hour after hour, by the bedside of this patient, *watching her progress to dissolution*, without being in the least able to prevent it." With our present knowledge of the antidotal properties of belladonna and strychnia, this life might easily have been rescued !

Value of strychnia in cases of embarrassment of the breathing, and in cases of renunciation of the chloral habit.

In poisonous doses strychnia is well known to induce asphyxia from convulsive contractions of the muscles concerned in respiration : in small doses it acts as a stimulant to the respiratory muscles through the respiratory nerve-centres, and is therefore antidotal in opium and chloral-poisoning. Fothergill and Thorowgood have pointed out some important applications of strychnia as a *respiratory-stimulant* in cases where there is much embarrassment of the breathing, as in cases of desperate bronchitis, whooping cough with bronchial complication, emphysema, and spasmodic asthma. I have used it at the Consumption Hospital here, in many such cases, with splendid success, either alone or combined with belladonna and sometimes morphia and iodide of potassium. Wherever the respiration is laboured and slow, or on the other hand shallow and rapid, and expectoration is difficult, the stimulating action both of the strychnia and the belladonna will be found most useful.

It has proved very useful in breaking off the *chloral-habit*, which, according to Dr. Richardson, is on the increase in England. A stout, easy-going

gentleman, æt. 64, had fallen into the habit, for some years past, of taking chloral-hydrate as a hypnotic. His condition, when I was called to undertake the case, was marked by the most deplorable depression of mind, with proclivity to tears, complete loss of appetite, with "beefy" tongue, great restlessness, staggering gait, and dilated pupils. I prescribed the tincture of nux vomica with dilute nitro-muriatic acid and tincture of ginger in infusion of calumba with good effect. The depression following *complete withdrawal of the chloral* was greatly mitigated, though it lasted more or less for a week together, with a small, quickened pulse, dilated pupils, haggard looks, and miserable appetite. By the end of the week he got some natural sleep at night, and he gradually lost his haggard looks, and regained his appetite and strength.

Case of spontaneous recovery from a colossal dose of opium.

In the summer of 1871, when resident in Kinkiang, I had a remarkable case of *spontaneous recovery* from what is probably one of the largest doses of opium on record! I carefully verified the fact that the patient swallowed four mace, or half-an-ounce, of the crude drug. He was 27 years of age, and at the end of twelve hours was able to sit up in bed, to speak when spoken to, and to swallow mustard and tepid water, &c., which failed to induce vomiting. He suffered for a couple of days from severe depression of spirits, pain in the region of the stomach, thirst, headache, spasmodic stricture of the gullet, and loss of appetite, with a dry, brown, leathery tongue, a full pulse of 120 and profuse perspiration. His recovery from the narcotic or sedative action of such a colossal dose was probably due to personal idiosyncrasy and

the *profuse diaphoresis*, which the hot weather at the time favoured. I am not aware whether the peculiar principles of opium have yet been detected in the perspiration, but the meconate of morphia has been found in the urine, the volatile oil of opium has been found in the breath and in the sweat, and it is well known that infants have been narcotized through the mother's milk; the probability, therefore, is that in this case there was active elimination of the narcotic principles through the skin, to which the patient owed his safety. On the third day the patient was still prostrate, feverish and perspiring, and *bronchial catarrh* had set in, with mucous râles everywhere audible throughout the chest, from which he was quite free before taking the opium. The bronchial congestion was clearly due to the action of the opium as a respiratory depressant, inducing temporary stasis or slowing of the pulmonic circulation, and it cannot be doubted that the exhibition of small doses of strychnia or nux vomica, when I first saw him, would have restored lost vigour to the pulmonary vessels and wholly prevented the attack of capillary bronchitis which imperilled his life and retarded recovery.

Dr. Dobratchetow, of St. Petersburg, relates the case of a lady, æt. 25, who made a *slow recovery* after taking 10 grains of acetate of morphia. The respirations fell to 6, 4, and even 2 per minute, and the pulse to 23, 28, and 12, fourteen hours after taking the morphia. Improvement set in after the injection of atropia in $\frac{1}{10}$ grain doses—twice repeated. After a prolonged sleep, the patient woke up on *the morning of the third day!* in a state of great debility, and for several days there was *complete forgetfulness*, at intervals, of what had happened the previous day, or circumstances were *referred to a period 10 or 15 years*

back! She ultimately made a good recovery, but the *timid* way in which the antidote was employed sufficiently explains its *slowness*.

How the moderate continuous use of opium injures the health. Induces the most serious derangement of the nervous and digestive systems.

The manner in which the *moderate continuous use of opium injures the general health* has been already, almost sufficiently, dwelt upon. In a word, it induces *serious disorder of the assimilative and nervous systems*. Von Boeck says: "The most characteristic symptom of chronic opium or morphia poisoning is *general disturbance of nutrition*. This, however, is not the result of increased tissue degeneration or accelerated tissue change; but is due to diminished absorption of food, in consequence of the *catarrh of the stomach and intestine* which exists. But this defective nutrition can never give rise to the sensation of hunger, on account of the steady, simultaneous reduction of the impressionability of the sensory nerves. The loss of appetite which chronic opium poisoning creates may depend somewhat upon the *paralytic condition of the vessels and nerves*, brought about by the constant influence of the poison. As to the origin of the various neuralgias, anæsthesiæ, hyperæsthesiæ, it is explained partly by the general disturbance of nutrition, which leads to fatty degeneration of most of the structures of the body, partly also by the direct influence of the poison upon the substance of the nerves." Dr. Johnston, of Shanghai, says: "Daily observation, in hospital and dispensary practice during the past eight years, as well as attentive scrutiny of the health of opium smokers in all classes of society, abundantly proves to my mind, *the dele-*

terious influence of opium smoking on the health, and the influence it has on longevity. Its effects on the constitution, as I have observed them, appear to be, in the earlier stages, sluggish liver, obstinate constipation, irritable stomach, loss of appetite, and generally speaking, impaired nutrition: later on, when the quantity smoked is large, there is an enervated condition of the whole system, constant epigastric uneasiness, total loss of appetite, great attenuation and general debility. *The effects of the drug are modified by the circumstances* of the individuals. It is amongst the poor labouring class of people that its most pernicious results are found. A working man who smokes opium has frequently to stint himself of the common necessities of life: the consequence is rapid deterioration of health and loss of muscular power. He becomes unfit for the usual amount of work, and the little he earns is spent on opium. Very soon he gets into a state of utter destitution."

"It is somewhat different in the case of those in comfortable circumstances. The deterioration of health is more gradual, although none the less certain, till at length the victim becomes enervated and emasculated, and suffers from general atrophy. The testimony of intelligent smokers as to the influence of the drug on the sexual appetite is, that in the earlier stages, when very little is smoked, it excites desire: later on, when the system becomes enfeebled from excessive use of opium, *impotence* results. Women, too, who become confirmed opium smokers are, *as a rule, barren.*"

It predisposes to disease.

"I cannot speak with certainty as to the alleged influence of opium smoking in *preventing disease*, but

judging from the large number of patients who are opium smokers, I am inclined to believe that instead of giving *immunity from disease*, it *rather predisposes to it*. However that may be, there can be no doubt as to the influence it has in weakening the natural powers of the constitution in resisting disease. This is especially manifest in such diseases as dysentery, fever, hæmorrhage and shock after surgical operations, in all of which the mortality among opium smokers is very great."

Demoralises the whole nervous system.

"The *morphine habit* is not uncommon in the United States; in its nature it is closely allied to chronic poisoning by alcohol, and as it is generally begun under the physician's recommendation, we ought to consider ourselves responsible for its cure." In recommending "pain killers," we should warn our patients against the danger of too frequently resorting to them. The protracted use of opium begets a special tendency to *neuralgia*, and *demoralizes the whole nervous system*."—Drs. Humphreys and Hackley in Niemeyer's Text Book of Practical Medicine.

Induces loss of memory and of physical and mental energy, and terminates in early death.

Loss of memory and of physical and mental energy are amongst the symptoms induced by opiophagy, and the man is apt to be untrustworthy in word and action.

Boeck says that in addition to the *maldigestion and emaciation* there are a series of cerebral symptoms; fanciful, discontented temper, giddiness, headache, sleeplessness, all possible eccentric neuralgias, failure

of memory, understanding, energy and will; patients become cowardly, untrustworthy, and regardless of truth; paralysis and diseases of the bladder are apt to set in.

Chronic meconismus generally terminates in early death, and months before the victims go about like so many "exhumed corpses."

Children who are used to laudanum look very skinny and miserable, and commonly die within the first two years of their life, of atrophy or hydrocephalus. (Grainger.)

Death supervenes by collapse or coma.

Day says the opium-eater dies in collapse, through nervous exhaustion (with blood poisoning and delirium), sometimes after an overdose, but oftener seeming to occur spontaneously, or in the midst of physical and mental agony as great as men can suffer in hopeful abandonment of the drug, and with a *colliquative diarrhœa*, by which the system relieves itself during the closing days of existence of the effete matters which have been accumulating for years. Again, he says opium-eaters endeavouring to relinquish the habit are sometimes overtaken by that *terrible coma* the same as occurs in persons poisoned by an overdose, or by the only less terrible opium delirium, of the same class and nature as mania potu.

Causes leading to the use of opium.

The causes leading to the use of opium are many, and among them may be reckoned the following:—Long continued attacks of diarrhœa and dysentery; intermittent fever; rheumatism and neuralgia; chronic cough and difficulty of breathing, for which the opium is *used medicinally* in the first instance, and

its use continued from habit ; as a *restorative* in cases of sustained exertion, as by the Tartar couriers, who travel with astonishing celerity, and by the Coolie class of Chinese labourers, a muscular and vigorous race, who do the principal carrying business of the country on their bamboo poles or wheelbarrows ; as a *pleasurable indulgence* for the relief of ennui, or listlessness, or vacuity of mind ; *from mere thoughtlessness* in many instances, when the temptation is put in their way—"A mouthful, now and then, with companions, for a joke ;" from *vanity* in others, as young swells with us take to the pipe and the cigar.

To these may be added the demoralising influences of poverty, the recklessness of despair, the wish for oblivion when one cannot make both ends meet—undoubted causes of the abuse of alcohol in this country. Dr. Porter Smith argues that inasmuch as excessive tea-drinking with improper food is a fruitful cause of dyspepsia and gin-drinking amongst the London poor, so the abuse of tea-drinking in China leads to depression of spirits, dyspepsia, and the opium-pipe. "What," says Rev. Frederick Robinson, "keeps the gin-palaces open? Misery! Condescend to no miserable materialism to escape your sorrow. *Take no opiate whatever* (in a letter of advice to a friend under suffering), it is a wicked and cowardly attempt to rule the spirit by the flesh. The results are slow, sure, and irreparable, and the habit grows until it is unconquerable. Remember what Maria Theresa said when she began to dose in dying: 'I want to meet my God awake.' Remember that He refused the medicated opiate on the cross."

Can the habit be overcome?

Oppenheim, speaking of the Turk, says: "Once a

Theriaki (*i.e.* opium-smoker or opium-eater) always a Theriaki—once begun, the habit is hardly ever relinquished. If the habit has become confirmed, it is *almost impossible* to break it off. When deprived of his stimulant, the *torments of the opium-eater are as dreadful* as his bliss is complete when he has taken it. Yet even in Turkey the attempt is made, those who do so usually mixing it with *wax*, and daily diminishing the quantity of opium, till at last the pill contains nothing but wax. This is the principle adopted by the native Chinese doctors, their pills containing a regularly-diminishing quantity of opium. Or the man is weaned from the opium by gradually increasing the proportion of tobacco in his pipe.

Exertion of the personal will indispensable.

The difficulty must, of course, be very much proportioned to the length of time the habit has been indulged in, and the quantity used, and, above all, to the strength of will and power of endurance brought to the task. Granted this latter *indispensable requisite*, and we may surely affirm that the habit of opium-smoking is not in any case irremediable. The difficulty of breaking it off is undoubtedly very great, but it is not insuperable. "Nothing in this world is impossible," says the Chinese proverb, "only men's minds are not firm enough to achieve it." N—C—, already quoted, says he cannot imagine a case where a confirmed opium-smoker could not reform himself, either by the power of native resolution, or if, by necessity, he is compelled to abandon the pipe. He mentions the case of a well-to-do Chinese, an inveterate opium-smoker, and consequently thin and delicate, who, being convicted of a crime in Hong Kong, was sentenced to a long term of imprison-

ment. When the sentence was passed, all his friends predicted he would die from privation of opium, his daily allowance for ten years past being five or six mace! Their fears, however, were groundless. He underwent his gaol discipline pretty fairly, though he was sick and languid for a time, and when he came out he was *healthy and strong*, and, in fact, physically speaking, an *altered man*. "For one thing," said the liberated prisoner, "I like the gaol very much: it has cured me of the confirmed habit of opium-smoking."

This case, as well as many others of a similar kind, which might be adduced, sufficiently expose the absurdity of Mr. Cooper's statement that if the opium-supplies were cut off one-third of the inhabitants would die!

The necessity for establishing opium refuges.

It also points very distinctly in favour of the establishment of opio-maniac retreats in China, corresponding to our own dipsomaniac establishments, where a strict control could be exercised over the unfortunate class, who might be induced to enter them, too weak in will to resolve, or too irresolute to carry out to a conclusion *the necessary abstention amidst the temptations and besetments of their daily avocations*. *

No great difficulty in weaning from the habit in some cases.

Dr. Chambers, speaking from a European experience, says, "the difficulty has been very much

* Experience shows how impracticable, in the large majority of cases, is any cure of a long-established opium habit, while the patient continues his daily avocations,

exaggerated." He mentions *the scorn* with which a genuine, strong minded man, a naval captain, who had been twice in his life a decided opium eater to the extent of a drachm of solid opium daily, spoke to him of the difficulty. *He had no difficulty.* The moment he saw the danger he began reducing the quantity by five grains daily, till he finally "knocked it off" altogether. *Moral and physical courage* are not among the special endowments of the Chinaman, and such resolution as this, one may safely say, whether in China or in Europe, is alike rare and admirable. A lady of means, a confirmed tippler in laudanum for 40 or 50 years, lately, to the extent of a gallon a month, was advised by her medical attendant to break off the habit by substituting a glass of water for every glass of laudanum she withdrew from her jar. The process of *weaning* was thus so gradual that she did not feel it much, and she was ultimately cured. Dr. Mann, of Louisville, adopts the plan of *gradual reduction* of the dose of morphia, combining it with the *bromides* or *cannabis indica*, and careful nursing. He says, *a cure may always be relied on*, and no fear of relapse need be entertained. It is comforting to have the assurance of one possessing De Quincey's experience that "the process of weaning one's self from the deep bondage of opium" is *a perfectly possible achievement*, and one which grows easier in every stage of its progress. Easier, we can readily believe it to be for one endowed with a stronger will, easier for one who has not put his constitution to the proof of an eighteen years' use and an eight years' abuse of its powers, when, in fact, the terrors of death by brain fever or lunacy besieged the alternative course. Yet for the sake of one so amiable and so gifted, and for the encourage-

ment of the thousands who at this moment groan under the dreadful yoke, let us rejoice that he finally triumphed! To this statement Mr. De Quincey adhered to the last; but Mrs. Gordon, daughter of Professor Wilson, at whose house he resided, says, "that the habit, although modified, *was never abandoned.*" Self deception is the common weakness of opium eaters. "An ounce of laudanum prostrated animal life in the early part of the day. It was no unfrequent sight to find him in his room, lying upon the rug in front of the fire, his head resting upon a book, and his arms crossed over his breast, plunged in profound slumber. For several hours he would lie in this state, till the torpor passed away. He was most brilliant towards the early hours of morning, when the charm and power of his conversation were so truly wonderful."

Physical and mental results of the weaning process.

In referring to my notes of my experience in treating Chinese patients for the opium habit, I find that more than a *tenth part* returned to report themselves *cured of the craving and the practice.* It is possible that a much greater number were really cured at the time, for the difficulty would be by no means formidable in cases of slight indulgence; but on the other hand, it is highly probable that many of the older and more confirmed debauchees returned again to the practice, "like the dog to his vomit." Poverty, and consequently, inability to purchase the drug, was the excuse, generally pleaded for coming to consult me. Some reduced the quantity from 3 or 4 mace to 1, and there stopped, unable wholly to master their *hankering after* the drug; or, over-

borne by the very great physical distress incurred on laying aside the pipe.

"From 80 grains to 60 and 50 grains was no great privation," writes one who conquered the habit, "but the doing without the remaining 40 grains was a terrific trial. During the month, over which the weaning process lasted, my condition may be described as one of intolerable and unalleviated wretchedness. Not for a waking moment was my body free from acute pain. Restlessness, both of body and mind, had become extreme, and was accompanied by a hideous and almost maniacal irritability. There was hyperæsthesia of the general surface of the body and of the special organs of sense, so much so that the least touch or noise caused me to cry out. Horseback exercise afforded the only alleviation to my sufferings, and yet such was my state of tremulousness and debility that I often could scarcely mount, or being mounted, retain my seat. I could not read, I could not sleep, and I had an insatiable craving for some sort of stimulus. The gnawing sensation at the stomach continued, and Stoughton's BITTERS was the only medicine which afforded me any relief. Illusions took hold of my senses, of burglars entering the premises, stealthy footsteps, heavy breathing, strange presences. I obtained the greatest relief from shampooing and Turkish baths, which seemed to eliminate the poison through the action of the skin."

"The following were among the principal effects experienced in weaning myself from opium," writes a physician of eminence in Connecticut:—"First, a sense of pressure on the muscles of the limbs, as of electricity accumulated there under a strong mechanical force. * Second, a disordered condition of the liver,

exhibiting itself in a variety of disorders, such as indigestion, bilious sickness and vomiting, frequent sighing and yawning, depression of spirits, constipation, &c., &c. Third, a sensitive condition of the stomach, which rejected even the easiest and most digestible food. De Quincey says the suffering caused by renouncing opium is not in mere lowness of spirits and dejection for a few days, but in a state of unutterable irritation of the stomach, accompanied by intense perspirations and diarrhœa, and feelings which may not be described. Fourth, acute shooting pains, confined to no part of the body. Fifth, an unnatural sensitiveness to cold, with frequent cold perspirations. Sixth, inaptitude for steady exertion, whether of mind or body. Seventh, a tendency to impatience and irritability of temper, with paroxysms of excitement wholly foreign to the natural disposition. Eighth, deficiency and irregularity of sleep. Ninth, occasional utter prostration of strength."

Another writes, "Amongst the first symptoms attendant on breaking off the habit are a constant propensity to yawn, gape, and stretch, together with languor and general uneasiness. Loss of appetite and a sense of constriction or cramp in the stomach come on, the mouth and throat become dry, and there is frequent sneezing. As the hours go on shudders run through the frame with alternating heats and chills, hot and cold sweats, while a dull incessant ache pervades the bones and joints. Then follows a host of indescribable sensations, burning, tingling, twitching, that seem to run immediately underneath the surface of the skin, and prompt one to cry out for relief or strike or clutch the nearest object in one's agony. The liver now also commences a most energetic action, and a violent diarrhœa sets in, the

dejections being at first simply loose, but soon purely bilious,—a dozen or more sometimes in quick succession, apparently composed of blackish bile, without a particle of fœces mingled with it. The interior surface of the bowels feels intolerably hot, as if boiling water were passing through the intestines, and every stool causes torture. The brain is excited and irritable, and the head aches and throbs as if it would burst. Sleep there is none, and one will go for ten or twelve days and nights without, so far as one can judge, a single moment's loss of consciousness. The strength is reduced to the lowest point, and the least exertion induces panting and distress.

“Unaided by medicine, these symptoms last for twenty or thirty days, gradually abating, and then die away. Then at length the patient begins to make up for long deprivation of natural sleep by prolonged “log-like” fits of somnolence, and he begins to look better than ever in his life. His mind regains its clearness, and his imagination its force, but he is still, and must for a long time remain, impotent for any enterprise or active duty of any kind.”

The following is a typical instance of the progress of the habit and the consequences following attempts at renunciation amongst Chinamen, from Douthwaite's reports of the Native Hospital at Wanchau :—

“He begins with smoking, say, twenty grains of the drug, once a day, probably for the relief of rheumatism or some other malady: immediately his pains vanish, and he finds himself in that blissful state of semi-consciousness which is heaven to a Chinaman. The next day he takes another dose, but find its effects are not quite so lasting as at first; so, after a few days, he has to increase the quantity of the drug in order to satisfy his appetite, and before many weeks are past he is consuming from two to three drams a day, which is as much as most working men can afford.

"By-and-by he finds that his strength is failing, and that, if he passes the usual hour for smoking he becomes nervous, and unable to attend to his business. He notices, too, that he is losing flesh, and that his skin is becoming very yellow. Perhaps his wife and friends exhort him to give up the vice, and he accordingly chooses a "lucky day" on which to renounce the pipe. He is firmly resolved never never to smoke again, and invokes the family god and the spirits of departed ancestors to help him to keep his good resolution. All goes well for a few hours, but towards noon he feels very nervous, and has no appetite for dinner. In the afternoon he tries to work, but has no strength. The time for his usual evening pipe comes on, and the craving becomes unendurable; still, he has made up his mind to conquer, and he means to do it. He goes to bed, but cannot sleep; his back aches, his head aches, his whole body aches, and the muscles of his legs twitch spasmodically; then diarrhoea or dysentery comes on, and in despair he flies back to his opium-pipe. In a short time his discomfort has vanished, he goes to sleep, and awakes in the morning with the firm conviction that he is doomed to be the slave of the opium-pipe so long as he lives."

Diarrhoea and bloody flux, tenesmus, abdominal pain, vomiting of food, gnawing and uneasiness in the region of the stomach, debility and loss of appetite, racking pains in the joints and limbs, muscular tremors and wakefulness at night, are amongst the symptoms complained of. The nerves are highly irritable (as if they lacked their daily nutriment), and the least thing—the rattling of a window or a knock at the door—throws the patient into a state of violent agitation. He becomes a prey to intense depression, and, full of alarms as to his condition, he often begs of the doctor "a hair of the dog that bit him," declaring, if refused, that his life is in danger. A slight degree of feverish reaction is often manifested, the pulse rising to 100, or even 120, the tongue is coated with a white fur, there is total loss of appetite and unceasing thirst, urgent diarrhoea, frequent mic-

turition, and profuse sweating. These symptoms last from three or four days to a week. Then the tongue gradually cleans, the thirst abates, the appetite slowly returns, the diarrhœa and diaphoresis cease, the pulse comes down, natural sleep supervenes, the mind recovers its tone, and the patient becomes conscious of the delicious sense of returning health and peace of mind.

Small hope in the case of confirmed smokers.

Dr. Dudgeon says, "There is very little hope for the lowest class of opium-smokers and opium-ash-eaters, those by whom the hospital boon is most readily taken advantage of. They have lost all moral power, and *must die victims* of the drug. Their life is so full of hardship, that it would seem to be their sole comfort." In another of his Annual Reports, he says, "Weaning or enticing the smoker, *once and for ever*, from his inveterate habit, *seems impossible* to human effort"; but in a later Report he says, "We have had abundant *proof of the efficacy of our remedy* in enabling persons to *overcome* the craving."

From Swatow, Dr. Gould writes, "Few opium-smokers come to be cured, and those who do, come, not with the earnest purpose of giving up the habit, but merely to tide them over a temporary difficulty, *i.e.*, lack of means to purchase the opium. Few confirmed smokers, it is to be feared, are able to break off the vice, while the great mass *become old men in their prime*, and are carried along, half-waking, half-sleeping, *to a premature grave*. We are constantly liable to be deceived by opium-smokers, who, while taking our drugs, (for which, contrary to our usual rule, we require some payment, as a guarantee

of their sincerity,) *still continue smoking opium.*" In a later Report, he says, "50,000 pills have been given away to some fifty or sixty opium-smokers, with *known benefit in some cases* at least!"

At the Shanghai Hospital some 300 or 400 opium-smokers are annually under treatment, besides a large number of cases of attempted suicide by means of opium, of which one-fourth of the whole number proves fatal! Dr. Johnston writes: "The only evidence afforded of success in the treatment of opium-smokers was in the regularity of the patient's attendance, and the gradual improvement in the health of many of them. Their subsequent history is unknown." In his Report for 1871, he says, "336 opium-smokers were under treatment, but with what success I am unable to say. In nearly every case, the reason assigned for wishing to give it up, was *not on account of the injury to the health, although that was apparent*, but rather because they were *too poor* to buy their usual allowance of the drug. Hence the probability is that the majority of our patients *will resume the pipe*, when they are better off." The late Dr. Henderson, of Shanghai, wrote in one of his early Reports: "We have had 295 cases of opium-smoking, of whom 42 were permanently cured, one of these a woman!" Next year, in order to have some guarantee of the patient's honesty of purpose in seeking his assistance, he required them to *bring their opium pipes* and leave them at the hospital, which rule modified the number of applicants amazingly! Instead of fifteen or twenty applicants daily, only twenty-eight pipes were brought within a period of three months and a half! Comment is needless.

Dr. Porter Smith insists on immediate and com-

plete renunciation of the pipe, and treats the patient in the Chinese fashion, with pills containing small and gradually diminishing doses of the drug. He believes a *small number* have been cured in this way. Again he says, "*We have no faith whatever in any permanent cure of this habit by the agency of drugs.* We believe that ghostly power alone can enable ordinary minds to free themselves from the fascination of this evil appetite."

Dr. Kerr, of Canton, had 117 persons under treatment for opium-smoking in 1869, from each of whom he required a deposit of a dollar, as security that they would stay in the hospital till cured—some ten or twelve days. "When the habit is of old standing," he writes, "it is a fearful ordeal the patient has to pass through. The reason generally given for the wish to be cured is *poverty*. So imperious is the craving that they will deny themselves necessary food, and even starve their children as well, to have their smoke. *It cannot be known how many continue to abstain*, doubtless many are *permanently cured*, in proof of which, some of them come back, long afterwards, bringing with them other devotees to get cured."

Sir Thomas Wade says, "*I know of no instance of radical cure.*"

S. S. Maunders, in his tract on the Opium Trade, says, "It is a melancholy and significant fact that the cure of opium-smokers is becoming *a less and less hopeful task* with medical men. In the early days of medical mission work, numbers were believed to be cured, but the tone of medical men is changed now. During the years 1869-70, 153 opium-smokers were discharged from the hospital at Ningpo, *cured or believed to be so*; but in eight months' time *all but*

two were known to have relapsed into their old habits again ! ”

A fiery trial must precede deliverance more especially in the case of the highly-gifted and more delicately organised.

Charles Lamb's "Confessions of a Drunkard," as, to the terrible nature of the ordeal to be passed through, are painfully applicable, *word for word*. to the man renouncing opium. "The remedy is simple. *Abstain*. 'Tis as easy as not to steal, not to tell lies. But when a man has commenced *sot* . . . how, from illuminating, it comes to darken, how from quick solace it turns to merely negative relief, thence to a restlessness and dissatisfaction, thence to a positive misery, yet I feel myself *linked to it*, beyond the power of revocation, *bone of my bone*. . . . Out of the black depths, I would cry out to all those who have but set a foot in the perilous flood . . . downwards, ever downwards, *with open eye and passive will*, perceiving all goodness emptied out of him, bearing about the piteous spectacle of his own self ruins, the springs of the will gone down like a broken clock, a joyless life, wearisome days, harrassed with a crushing sense of my own incapacity and cowardice—the springs of action broken, of moral action deadened within me. . . . Trample not on the ruins of a man. Exact not, under so terrible a penalty as infamy, a resuscitation from a state of death almost as real as that from which Lazarus rose not, *but by miracle*.

"Begin a reformation and custom will make it easy! But what if the beginning be dreadful, the first steps, not like climbing a mountain, *but going through fire*? What if the whole system must under-

go a change, violent as that which we conceive of the mutation of form in some insects? What if a process *comparable to flaying alive* be to be gone through?"

The Cure.—Immediate renunciation demanded.

The first and essential element in the *cure of the opium habit* is to *insist on the sudden and immediate withdrawal of the drug*. All who have had any sufficient experience in the treatment of opium-smokers and opium-eaters, with the single exception of Dr. Mann, of Louisville, U.S., agree in this. The risk of collapse from sudden privation is wholly imaginary; and, though involving *sharper suffering at first, it becomes every day easier to bear* (specially good and sustaining nourishment being taken in the meantime), and is thus really the kindest and most efficient method of curing the patient. Chronic alcoholism, as every one knows, is best treated in like fashion. Dr. Anstie's directions for the treatment of alcoholism are literally and substantially applicable in the treatment of opiumism. "One has only to insure that the patient practices a proper abstinence from drink" (or opium), "to insist upon his taking a diet as rich in nitrogenous matters as may be, but at the same time such as his digestive system can appropriate, and to administer certain tonic remedies, and in nearly every case we may count upon a rapid disappearance of all the unpleasant symptoms of which the patient complained."

Sudden withdrawal not attended by any danger.

"I wish," says Dr. Anstie, "to express the decided opinion that *complete abstinence* may be carried out without any immediate danger to life or health, if

proper care be taken to supply a substantially nourish-nourishing diet."

Dr. Wilkes, to the same effect, writes: "*The only treatment* really required in the case of confirmed inebriates is *resolutely to break off the stimulant*. Delirium tremens is a bugbear, which need give no fear, however suddenly the drink is discontinued."

This abrupt method of dealing with the opium debauchee is equally free from danger, and is less trying both to the physical and moral powers than a gradual disuse, because, as Dr. Fleming well observes, after every dose, however small, the same reaction takes place; the physical and mental craving returns as before; the temptation to an occasional increase (for which an excuse is easily found) is ever before them; and the trial is so *protracted and exhausting* that very few have the courage to persevere.

Better than the gradual system.

Dr. Mann's cases under the *gradual* system, it is worthy of remark, are cured in from four to eight weeks;* whereas patients under the *abrupt* method,

* Horace Day, of New York, another advocate of the gradual plan, recommends a rapid reduction of the daily allowance to one-half, and the remainder by daily diminishing doses of one or two grains. Everything depends on the patient's resolution "never to go back," or forego the advantage he has already attained. The weaning process took up over forty days in one of the examples quoted, the patient descending from 80 grains to 20 in the first week, from 20 to 15 in the second week, from 15 to 10 in the third, from 10 to 5 in the fourth, from 5 to $2\frac{1}{2}$ in the fifth, and from $2\frac{1}{2}$ to a grain and none during the last fortnight. He insists on a rigid observance of the rule, "*Never to increase the minimum dose that has once been attained.*" Walking exercise, whatever the state of the weather or the patient's spirits, is indispensable to a cure. De Quincey commends the above plan with his own high authority. "Once for

if cured at all, are set free from the dominion of the habit within two or three weeks! This plan of suddenly suspending the use of the opium was ably recommended by Professor Christison in 1850, and successfully carried out by Dr. Fleming, of Birmingham in 1867-8. "We know well," says the latter, "that many persons can summon courage to undergo with a kind of desperate determination severe *suffering for a short time*, who could not sustain a protracted struggle against a lesser evil. Weaning is *effected in a few days*. Having passed the ordeal, the system recovers its healthy tone, the physical craving is entirely removed, and the delicious sense of returning health is most grateful. These circumstances, combined with the gratifying conviction that a degrading habit is conquered, prove an additional protection against the recurrence of the vice."

• *Physical regeneration follows.*

De Quincey speaks of the *physical regeneration* which his system underwent from the complete sus-

all," he says, "I advise that in *cases deeply rooted* no advances ought ever to be made *but by small stages*, lest human impatience, under the too exquisite suffering, brings the trial abruptly to an end, through the crisis of a passionate relapse." The digestibility and culinary preparation of food is the second important point in De Quincey's scheme, broiled beef and stale bread in his own case; and thirdly, walking exercise to the amount of eight or ten miles a day. Frequent cold baths, followed by friction with a hair brush, formed another important element in the treatment, and was extremely beneficial in combating the tendency to cold damp sweats and eternal freezing perspirations. De Quincey counsels the patient not to make the mistake of supposing that his amendment will necessarily proceed continuously, or by equal increments. The line of progress will be, indeed, an ascending line on the whole, but with frequent retrocessions into descending curves and sorrowful collapses.

pension of the practice, and declares that ever since he has had at intervals a restoration of more than youthful spirits.

Dr. Lockhart says: "After many years' residence in China, and much experience in the treatment of opium-smokers, I may say that I have *never known a single person dying from sudden and absolute prohibition of the opium-pipe.*" Dr. Porter Smith, in his *later practice*, "insisted on immediate and complete renunciation of the opium-pipe. In nearly a dozen cases, accustomed to smoke six or eight mace of the prepared extract of the Indian drug, the *sudden total withdrawal of the drug was not followed by any serious consequences.*" Even Dr. Day says he is always in favour of a man's "breaking off short," if he can. He has known a most excessive case of opium-eating, amounting to 32 grains of morphia per diem broken off suddenly and successfully; but the man had been addicted to the practice for *less than a year*, and possessed an exceptionally good constitution of mind and body. Where the custom has lasted for four or five years, and the quantity taken is large, *absolute prohibition* might result in death from nervous exhaustion, or suicide prompted by the extremity of unrelieved suffering.

Dr. Thin, of London (formerly of Shanghai) says: "I have never in my life, except once, seen any harm done by suddenly breaking off the use of stimulants (whether opium or alcohol), and that case was a doubtful one—fatty heart and menorrhagia—but the stomach had got into such a state that it was desperate, and I was glad to try anything."

Dr. Kane says he has often cured opium smokers—"opium fiends" of eight or ten years' standing—

in a week's time, and with very little suffering. Such patients cannot be satisfactorily or reliably treated except in an institution, where they can be watched and restrained day and night for at least two weeks. He withdraws the pipe absolutely, and withholds opium and morphia in every form, but administers the bromides in 100 grain doses, twice daily, in plenty of water, if there is much reflex nervous trouble. He gives capsicum, digitalis, and cannabis Indica tincture in large doses; hyoscyamus and chloral, if necessary, to induce sleep; stimulants, of which iced champagne is the best, during the first 48 hours; hot baths and cold spray, with massage and electro-massage for the pains in the limbs. Tonics, with phosphorus and cod-liver oil, and outdoor exercise are all called for.

Von Boeck says: "According to my experience, the most effective plan is *to arrest the habit suddenly, with one stroke*, if we have to do with tolerably healthy individuals: *they are not subject to collapse*, especially if wine is freely administered. It is easier to cure a morphine eater of his practice than a morphia injector; frequently our only resource is physical violence.

Renunciation illustrated.

A young doctor could only be cured of giving himself morphia injections by being *actually shut up in a room for more than a week!* He resisted like a maniac, scratched at the walls with his nails, wept and shrieked from misery, ate nothing, and was unable to sleep, had diarrhœa, &c. At last, after some days of unmerciful treatment, he began to feel better, to sleep, to eat, &c., he gained weight, the misanthropy gave way to a longing for social intercourse,

he was able to resume work, he recovered his taste for tobacco, and smoked and drank beer as in the days of his health." Some patients, once cured, look back upon the drug and their former evil habit *with horror*; others *easily fall back* into their old vice, injecting morphia or swallowing it upon the next recurrence of physical pain or mental excitement.

"*Gradual weaning involves the danger of easy relapse.*" The agonies they have endured in the weaning process have an undoubtedly *deterrent influence* on many minds against farther tampering with the drug. Humphreys and Hackley say: "If we have the patient completely under our control, and have his earnest co-operation, we might certainly, *in some cases*, break off the habit without the rude shock implied by entire suspension of the drug, which might be administered, *without his knowledge*, the last thing at night. Sleep is of the first importance in the treatment; appetizing food should be offered, and mental and physical occupation provided. Frictions with alcohol check pain and reduce the sweating of the hands and feet."

Before commencing the treatment, it is important frankly to warn the patient of his danger, and to make him understand that the chief agent in the cure and the deliverance is himself, and only himself.

"Who would be free, *themselves* must strike the blow."

He must be forewarned of the very considerable suffering which privation of the drug must entail, and encouraged to the exercise of all the moral courage and resolution he can command, with a view to an ultimate cure. The admirable teaching of Laou-Tsze, one of the great sages of China, should not be without effect in bracing them to this effort of self-

conquest: "He who overcomes others has physical force, but he *who overcomes himself* has moral strength."

A few cases there may be in which the severity of the patient's sufferings and the signs of mental and bodily prostration *are so alarming* as to demand no little fortitude on the part of the attendant *to adhere to the plan of total abstinence*, and to resist the importunities of the patient and his friends. The combined testimony of almost all who have had sufficient experience is, however, in corroboration of Dr. Fleming's practice, and the rule here laid down "that notwithstanding some aggravated examples, he has never had occasion to depart from the rule of sudden and total abstinence."

Having *absolutely interdicted* all use of opium, and taken the necessary precautions against the patient procuring it surreptitiously—a thing which can hardly be carried out with any certainty except the person become an inmate of a hospital or opium refuge, I prescribe the following:—

R—Tincturæ Nucis Vomicae.

Acid Hydrochlor dil.

Tinct. Humuli vel Aurantii .. āā ʒ ss.

Ætheris Chlorici ʒ iij.

Infusi. Cascarillæ vel. Chiretto .. ad. O ss. ℥.

Sig.:—ʒ ss., vel. ʒ j. every four hours, half-an-hour after food, in a wineglassful of water.

Beef-tea is administered at frequent intervals, and hot bath employed for the relief of the patient's sufferings.*

* The employment of the hot bath, in what would ordinarily be excess, is absolutely necessary as a sedative throughout the first week of the struggle. The temperature should be maintained at 110° F., continued as long as the patient finds relief from it, and may be resorted to a dozen times a day. Opium

Acids and Nux Vomica pre-eminently Serviceable.

Haller recommends *acids* as a means of counter-acting the narcotic and other debilitating effects of opium; in the above prescription the tonic influence of the acid is supplemented by the *tincture of nux vomica*, an invaluable remedy in atonic dyspepsia, habitual constipation, and also, in the opposite affections, mucuous enteritis, diarrhœa, and dysentery, one and all of which are amongst the sequelæ of opium smoking, or its renunciation. It gives tone to the heart, and depth and freedom to the breathing from its stimulating action on the ganglionic centres of respiration and circulation. Dr. Wilson Fox remarks that *nux vomica*, or its alkaloid, often proves most valuable in cases of debility of the digestive organs, improving the nervous energy of the stomach, as well as that of the system at large. By increasing the muscular contractility of the stomach and intestines, it aids in preventing *distension by flatus*, which is so common and distressing a symptom. In *tremors of the limbs*, whether produced by intoxication

more or less paralyses all the excretory functions of the body, except that of the skin, hence the Anorexia, constipation, hepatic and biliary derangements, with withered, sallow complexion and impure blood. Its action seems largely to imply *arrest of function*, to cause a fatal conservation of the tissues, a slowing of the fires of the system, and defective oxidation and tissue change; and this, there seems good reason to believe, is to a large extent due to the *progressive accumulation of the poison in the bodily structures*. Hence the value of the hot bath and wet sheet in the treatment. Dr. Day says he obtained conclusive proofs of the exudation of morphia from the pores of opium-eaters on analysis of the water wrung out of the "wet pack" in which the patient had lain perspiring freely for an hour and a half, and this though the patient had not used opium *for a fortnight*.

with alcohol or opium, it is recommended by Pereira and Anstie, as also in some forms of neuralgia and sciatica, and in all forms of nervous exhaustion. As an *anti-periodic* the value of strychnia is beyond question, and combined with aloes and iron, in the form of pill, it is useful in the anæmic or chlorotic condition of many opium-smokers. In the latter class of cases the following is a good receipt:—

Rx—Ferri et Quinæ Citratis	3j.
Strychniæ Sulphatis	gr. j.
Sp. Ammoniac Arom.	5 v.
Ætheris Chlorici	3 iij.
Aq. Cassiæ	O ss. ℥.

Sig. :—3 ss. ter die ex aqua post cibum.

In small doses, says Latham, strychnia acts as a simple tonic, increasing the appetite and improving the digestion; it dilates the vessels, and thus increases the supply of blood, and it augments the activity of the spinal cord. (Harley.) It promotes the capillary circulation, and therefore its use is advisable for persons troubled with cold feet and hands. (Anstie.) M. Brugnoli has employed the alcoholic extract of *nux vomica* successfully in certain of the neuroses of organic life, such as gastralgia, dyspepsia, hypochondriasis, nervous palpitations of the heart, nervous and periodic coughs, and asthma. He thinks it acts on the great sympathetic, the pneumogastric, and the spinal cord.

A very handy receipt, *in the form of pill*, adapted for carrying about the country, and extensively used at the Mission Hospitals throughout China, is the following:—

Rx—Ext. Nucis Vom. (vel. Hyoscy.),	gr. ij.
Quinia Sulph.	gr. i.
Pulv. Capsici	gr. i.
Ol. Menthæ Pip.	gtt. ij. ℥ ft. pil.

Sig. : One 3 or 4 times a day in the interval between meals, or as often as the craving is felt.

Illustration.

To mention one case out of many where the pill was employed successfully. A schoolmaster æt 35, and an opium-smoker of 15 years' standing, who first commenced the drug for the relief of *asthma*, applied for the pills "to support the system" while he weaned himself from the habit, which had so grown upon him that he smoked a *tael* daily. He took a large supply of the pills home with him, and says he experienced no difficulty in doing without the pipe *as long as the pills lasted*, but if he intermitted them, a kind of dysenteric diarrhœa supervened. He was ultimately cured. The pill answers well in allaying the morbid craving, and at the same time giving tone to the stomach. In the majority of instances, breaking off the use of the drug is followed by loss of appetite and debility, sometimes wrenching pains in the limbs, seldom diarrhœa, while using the above-named remedy, but usually within a period of two or three weeks the system accommodates itself to privation of the wonted stimulant, and health is recovered.

Where spanæmia or chlorosis is a marked symptom, *intractable* to ordinary measures, the following receipt of Dr. Greenhalgh's is invaluable:—

Rx—Ferri Redacti gr. ij.
 Pepsinæ Porci gr. ij.
 Ext. Bellad. gr. $\frac{1}{6}$.
 Strychniæ gr. $\frac{1}{16}$. ℥ ft. pil., tales xxiv.

Sig. : j. ter die ante cibum.

Old opium-smokers are liable to a condition of chronic catarrh of the bronchial mucous membrane, with dyspnœa or asthma, and in such cases the best results follow from the same remedy in the following combination:—

Rx—Tinct. Nucis Vom. ʒ ss.
 Tinct. Belladonnæ ʒ ij.

Sp. Ammoniae Arom.	℥j.
Potassii Iodidi	℥j.
Infusi. Serpentariae	ad. O ss. ℥.

Sig. : ℥ ss. pro rê nata.

Dr. Fleming's method.

Dr. Fleming commences the treatment with dilute phosphoric acid (℥ x.) and tincture of hops (℥ xxx.); ℥ ij. every four hours, half an hour before food; and affirms that this remedy sustains the patient, lessens the force of his sufferings, and shortens their duration. Where there is much irritability of the stomach and great depression, this *nervine and calmative tonic* answers well. Dr. Mann employs a tonic consisting of 1-32nd of a grain of strychnia in combination with phosphorus and quinine to excite reflex action and build up the nervous system.

Quinine alone answers!

Quinine alone, together with nourishing diet, is employed by Dr. Lloyd, of the Lambeth Infirmary, in restoring patients who are cutting themselves off from the use of opium. He relates four cases in the *Lancet* for January 7, 1879, in which large doses of opium, continuously taken for a period of years, were suddenly discontinued without the least ill-effects, but, on the contrary, with an increase of weight and a general feeling of thorough sound health to which they had long been strangers.

Ammoniated tincture of valerian.

All the strong bitter tonics have more or less the same action as strychnia and quinine, and the changes may be rung upon them, or they may be combined with anti-spasmodics, such as the *ammoniated tincture of valerian*, which was helpful to Coleridge, and which De Quincey says, was absolutely the only remedy which

proved in the least useful to him in his struggles to conquer the habit. 3 j. or 3 ij. of the ammoniated tincture of valerian often acts like a charm in cases of nervous headache with great nervous depression. Where such symptoms occurred in conquering the opium habit, together with lethargy in digestion, *a nip of gin and bitters* before meals might be allowed, or the old-fashioned *dinner pill*, an excellent hepatic stimulant and appetizer:—

Rx—Pulv. Ipecac.

Pulv. Piper Nigr. aa gr. i.

Strychniæ gr. $\frac{1}{10}$.

Pil. Aloes et Myrrhæ . . . gr. iiss. ℥ ft. pil.

Sig.: j. twice a day, before or after meals.

Dr. Porter Smith found the following combination useful:—

Rx—Tinct. Hyoscyami.

Tinct. Valerian Amm.

Sp. Ammoniæ Fœtid. aa 3j. ℥.

Sig.: 3j., 3 ij. pro rê nata.

Specially nutritive and sustaining food required during the ordeal!

Special attention must be paid to *the nutrition* of the patient during the ordeal. A highly *animalized diet*, consisting of strong meat soup, oyster soup, animal broth, egg flip, alternated with milk gruel, rice-milk, milk and tea in equal quantities, and toast water *ad libitum*, and then, as the stomach recovers its tone, fish and fowl and the ordinary diet. *Cocoa with milk*, representing, theoretically at least, an *almost perfect food*, combining the albumenoids, or “flesh formers,” and the carbo-hydrates, or “heat producers,” in due proportion and in the most assimilable form, will be found suitable from the very first, and give the initiative to better nutrition. Beef

essence, and the "concentrated" preparations of meat have a powerfully reviving effect upon the exhausted nervous system; they can be assimilated in the very earliest and most difficult stage of the treatment, and strengthen the digestive organs themselves to deal with more bulky forms of animal food.

If the stomach is very irritable, a grain of quinine, or any of the other bitter tonics, may be given in a state of effervescence with bicarbonate of potash and citric acid. A little brandy in soda water, or a glass of good port, is permissible in cases of marked faintness and exhaustion. In some cases there is a febrile condition of the mouth and tongue, with irritability of the stomach, and, it may be presumed, a sub-inflammatory state of the gastric mucous membrane, in which the judicious use of *calomel* is to be recommended.

Sleep indispensable to cure.

Sleep has been called *the food or feeding-time* of the brain, and every care should be taken to ensure sound natural sleep in these cases.* Insomnia is a great obstacle to that repair of the nervous energy without which recovery is impossible. The supper should be light, yet nutritive, consisting of strong meat essence and a little toast, and administered, as all the meals should be, *hot*. A glass of hot whiskey

* *We must invoke sleep by natural means if possible.*

Healthful and sufficient daily exercise in the open air; a light and refreshing evening meal; congenial society, with pastime or music in the evening; repose, during the exhausting summer weather, in *a swing bed*; the hypnotic effect of shampooing, or gently stroking the skin, mesmeric fashion, so as by the monotony of the action to exhaust the senses and induce sleep—one or other or all of these may be employed to secure this most desirable end.

punch, or half a pint of good bottled stout, may suffice to procure a good night's rest, and prevent our having recourse to the soporific narcotics.

Immensely aids histogenetic processes.

During convalescence the patient is in much the same condition as a child. It is, or ought to be, a period, if not of growth, of *great repair*; a condition analogous to growth. The appetite, digestion, and assimilation are *greatly influenced by sleep*, as may be inferred from the ill effect of a sleepless night on ulcers on the surface of the body. After a restless night these are found to be painful, throbbing, inflamed, and apt to spread, whilst after a refreshing sleep they put on a much healthier appearance, and become filled with granulating tissue.

But hypnotics may be required.

In general the use of hypnotic remedies may be dispensed with, good sustaining food, hot baths, and the direct tonics, quinine and strychnia, *sufficing to induce that state of nervous tranquility* which makes sleep possible. Should we be compelled to have recourse to them, we may first try the effect of 3j. doses of sulphuric ether at bedtime, or 30 grain doses of bromide of potassium, or 40 to 60 minims of tincture of Indian hemp with 3j. of ether. Chloral hydrate in 20 or 30 grain doses in sherry is a *very efficient sleep producer*.*

* As a sedative, Day found Cannabis Indica, in drachm doses frequently repeated, very useful in some cases; in others he administered the bromide of potassium with the happiest result, pronouncing the latter the nearest approach to a succedaneum for the alleviation of the tortures of opium that any remedy can pretend to.

His general plan of treatment is as follows:—The galvanic

The tonic regimen must be persevered in for some time.

When convalescence is established, the *tonic regimen* must be strictly enforced, and the tepid baths with nitro-muriatic acid (recommended by some from the commencement of the treatment) left off, in favour of a daily sponge or shower bath. Dr. Fleming recommends iron and zinc to be given on alternate days. Dr. Marcet maintains that the oxide of zinc

battery is applied by placing both feet in contact with the negative electrode, while the positive is carried along the spinal column; a five grain pill of capsicum is administered, and then a dose of 15 or 20 drops of nux vomica. Should the patient now obtain sleep, good and well; if not, he should be taken to the Russian bath and lathered, shampooed, and plied with ascending, descending, and horizontal showers of hot water at a temperature agreeable to the patient, in an atmosphere of steam at 120° F., until he streams down with perspiration, after which he takes a hot or cold plunge bath, is carefully rubbed down in a room with a temperature of 70°, and carried off to bed. Some concentrated beef tea may be administered before, and again immediately after quitting the bath. Lamb broth, with rice and all the more concentrated forms of nourishment are to be given repeatedly in small doses at a time, and as the vigour of the stomach returns, generous diet of all kinds. Exercise, carried to the extent of healthy fatigue, is taken at the gymnasium and bowling alley, or by means of gardening or boating, and horseback riding is provided for such as are able and competent for it. But the bath and the element of water variously applied is his principal agent both for the relief of the patient's sufferings and the elimination of the poison. The "*wet pack*," or "*dripping sheet*," occupies a first place. Its sedative effect after one or two doses of bromide of potassium is exceedingly happy, and should be followed by a sponge bath of brine, and vigorous hand-rubbing by the attendant. Cerebral congestion and the chronic sense of fulness in the head are alleviated by the use of the sitz-bath. But the most indispensable agent in ameliorating the sufferings is the *full hot bath*, at a temperature of 110° F., and it may be indulged in as often as 15 times a day,

has a powerful effect in inducing sleep, and the following is a good formula:—

Rx—Zinci Valerianatis	gr. ij.
Quiniæ Sulphatis	gr. i.
Extracti Lupuli	gr. s. Ft. pil.

Sig.: One night and morning.

The citrate of iron and quinine with strychnia, as in Easton's syrup, or the syrup of the phosphate of iron with equal parts of dilute phosphoric acid, are valuable in teaspoonful doses after meals. In aguish cases with deficiency of red globules, Fowler's solution of arsenic might be combined with the iron and quinine, and administered in 3 or 4 drop doses after meals.

Anti-dyspeptics.

Where there is dyspepsia of the starchy matters of the food, the *malt extract*, previously mixed, as recommended by Fothergill, with a portion of the meal as

each bath lasting as long as the patient feels relief. The galvanic and the Turkish baths are also serviceable in special cases. Shampooing plays an important part in the cure, and he suggests the use of some machine by means of which "passive exercise" of the whole muscular system can be endured in the case of persons too debilitated to take it for themselves.

The profuse and weakening diarrhœa may be safely neglected; it is Nature's own method of eliminating the poison from the tissues, and must neither be checked nor retarded. During the early stage of the treatment the patient must be fed night and day with beef-tea in teacupfuls every hour or two. As soon as he is able to sleep, say three or four hours in the 24, the frequent use of the hot bath gives place to the *pack*, the *wet sheet*, and the *shower bath*, so as to tone up the system, and sedative remedies, if used at all, give place to tonics. Quinine, nux vomica, and the pyrophosphate of iron are the most to be relied on. The use of alcohol in every form he considers worse than useless.

gruel, panada, rice-milk should be tried, and where the albuminoids are slow of digestion, pepsin or pepsin wine is very usefully mixed with a certain proportion of dilute hydrochloric acid, and administered after meals.

Electricity.

Electricity is much recommended by Dr. Mann as a general tonic.

Cure by smoking Stramonium.

The late Dr. Henderson gave his patients pills of gum assafoetida to take, and *caused them to smoke the leaves of the Datura Stramonium* three or four times a day. He cuts off the use of opium at once, and says that he has found this plan answer his highest expectations! It is a plan well worthy of further trial. Stramonium, like tobacco, undoubtedly exerts a tranquillising influence on the mind, it steadies the nerves, and while exerting a sedative influence on the heart and circulation, maintains the depth and freedom of the respiration, like belladonna. All the plants of this natural order (capsicum, tobacco, hyoscyamus, belladonna, stramonium) seem to have properties more or less antidotal to opium, and the smoking of the *stramonium*, as suggested by Dr. Henderson, may turn out to be one of the best methods yet recommended for enabling the opium smokers to conquer the craving. The principle is not unknown in medicine, and one might even find it hinted at in the universal page of Shakespeare :—

“Take thou some new infection to thine eye,
And the rank poison of the old will die.”

The Coca cure.

Coca, the popular narcotic beverage of South

America, like the latter class of remedies, *dilates* the pupil in large doses, and has lately come into fashion in the United States as a means of conquering both the whiskey and the opium habit. The fluid extract is taken in doses varying from 3 j. to 3 iv. whenever the desire for these morbid stimulants arises. Dr. Bentley has had as many as eleven permanent cures. He says that coca produces a more ecstatic and exalted feeling than either opium or alcohol, *without after depression*, and when substituted for either of these perfectly allays the craving. I have not myself found any very marked effects from the drug taken in the doses indicated by him. It seemed to induce a kind of easy languor and a slightly giddy feeling, like that in incipient intoxication, not, however, sufficient to interfere with business. There was not the least excitement of mind or pulse. Dr. Bentley recommends 3 j. doses whenever the craving arises; Dr. Hulse 3 ss. doses night and morning. In every case the patients gained weight and recovered their health and spirits. Dr. Bartholow (*St. Louis Clinical Record*) states that the active principle of the Erythroxyton coca acts like theine and caffeine as an *indirect nutrient*, checking waste and sustaining the economy under privation of food and during great exertion. It lessens the sense of fatigue, and increases the respiratory powers. Drs. Palmer and Steele speak of coca as *the great antidote for the "blues,"* whether arising from privation of alcohol or opium. It annuls the opium crave, and imparts a feeling of contentment and cheerfulness to the woe-begone sufferer.

Opium refuges.

Opium refuges, for which there is a *raison d'être* in

all the great cities and towns of China, should be planted in the suburbs, in a pleasant situation, and with as much ground as possible, so that the inmates may be usefully and agreeably occupied in gardening and even farming operations. The grounds should be laid out in the pretty grotesque style affected by the Chinese, with rockeries, caves and arches, fish-ponds and shrubberies, with croquet lawn, bowling green and cricket field superadded. The simplest building for the purpose, to accommodate 40 persons, should be two storied, the upper rooms to be used as a dormitory, the lower for entertainment.

Plan and Management.

The residence of the medical superintendent and matron should be placed in the middle of the centre of the establishment, and behind this the kitchens, sculleries, bakehouse, washhouse, &c., while the wards, one for men and the other for women, or both for men (with a smaller building in the rear for women), should stretch as wings from the medical superintendent's rooms. The windows should be large and deep, and the building enclosed on all sides by a verandah. The dormitory wards and entertaining rooms should be provided with two opposite rows of windows, to admit of cross ventilation, and the walls plastered with silicate plaster, which admits of being washed. Each ward should be furnished with hot and cold baths and water closets, an iron bedstead for each patient, with washstand and towels. The walls should be hung with coloured prints and pictures. Each ward should be placed under the charge of two ward masters, one for day, the other for night duty; and these men should

be selected for their perfect reliability, firmness, good sense, and good temper.

The lower storey should be set apart as a library and billiard room, and should be provided with all available books, magazines, charts, maps, pictures, and games for amusement and instruction, together with draughts, cards, dominoes, chess, nine-pins, backgammon, battledore, billiards and skittles. Moveable tables and chairs would greatly add to the convenience of the patients for the enjoyment of these games. Plants might be cultivated, musical instruments introduced, and by means of a piano, harmonium, or organ some musical entertainment provided. A racket court and an out-of-door gymnasium, protected from the sun and rain, would prove highly advantageous, and a walk for *spinning string* would prove a useful adjunct to the institution not to be despised.

For female patients, needlework, embroidery, painting, domestic occupations, cooking, washing, feeding poultry, attending to singing birds, weeding the flower beds, and other out-of-door exercises should be provided.

The house, if necessary, should be heated by steam pipes, with hot-air furnaces in the basement.

The patients should dine together, and well-cooked food, *sufficiently varied*, should be regularly and nicely served. Too great attention cannot be paid to the *quality of the soups*, the adequacy of the dietary greatly depending upon the amount of nutritive matter in the slops.

Labour, exercise, and social intercourse preserve the body in health, prevent the mind from brooding

over its secret troubles, and fit it for the reception and assimilation of healthy, nourishing food. But it is a question whether *remunerated labour* would not give even better results. To leave the institution with a little money in his pocket, after paying for his keep, would be no mean argument with a Chinaman for going through the purgatory of weaning from the opium-pipe, and the *mental influence* would far surpass that of aimless, unpaid work. The handiest race in the world, there is nothing they could not undertake. Tailoring, washing, mangling, cooking, cutting fire-wood, breaking metal for roads, trenching and laying out grounds, &c., &c.

In the great plain of Central China, where cities and population abound, the inmates of these retreats might be employed in erecting *mounds* in the midst of their airy grounds, which might be paved atop, and from which commanding views might be obtained of the surrounding country, which would tend greatly to relieve the monotony of the seclusion, and the depression of those suffering from opium's ravages.

Animals of various kinds, especially such as would become familiar with the patients, might be kept about the grounds, and would prove a source of much innocent pleasure, and tend to awaken the social and benevolent feelings. This is already a customary practice in the adornment of the grounds of the rich mandarins and native merchants.

It is difficult to conceive a more important task than falls to the lot of the Superintendent of such a retreat—to restore or repair the *spoiled minds of society*. Great firmness, good sense and good temper, ingenuity and tenderness, and an inexhaustible pa-

tience, are all essential here. He must have tried kindness of heart. He must live with his patients and in a sense for them, visiting them, several times by day, and even by night, if he is to aid them in the glorious work of self-conquest. He must be, at once, their physician, director, and friend, and the manners and language of all who are employed in the retreat must reflect his. Fame will scarcely reward him, and the work itself implies an abandonment of worldly advantages. As Esquirol says of the physician to the insane, "We must, as it were, make an abnegation of self." But since the creation of mind is a task worthy of the divinity, and to describe it, the highest reach of philosophy; it is no mean task surely to disencumber it of its physical oppressions, to set it free from enslaving customs, to restore mental faculty, that the thrall may lose his chains, and once more,

"On reason, build resolve,
That column of true majesty in man."

The all-important essential in the management of such a retreat is *constant watchfulness* on the part of the officials, and the absolute prohibition of the introduction of all stimulants and narcotics whatever.

The Chinese people once addicted to drunkenness.

Mr. James Samuelson, of Liverpool, in his "History of Drink," says there is incontestable evidence, *in the early history* of the Chinese, of prevalent intemperance in the use of spirituous liquors.* This

* Father Navarette, in his account of the Empire of China, published in 1722, says, "The Chinese drink all their wine very hot: they like the taste, and will take a glass too much. They

may be inferred from numerous passages in the classical books, and from at least one edict "the announcement about drunkenness," promulgated from the throne about 1116 B.C. How a people whose history 3000 years ago presented such features, should not only have maintained their national existence, but should have become *sober*—the most sober people, in point of fact, on the face of the earth, it is difficult to explain. It may have coincided with the spread of Buddhism, which inculcates total abstinence from all intoxicants, upon the priesthood and such of the laity "as are desirous of accumulating merit." But, however it came about, the fact at least, offers grounds of hope that a nation which at an early period in its history effected an almost complete reformation in manners with respect to the abuse of alcohol, may gird itself anew to the more arduous task of wholly renouncing the use of opium as a luxury.

I frankly confess, however, that I do not look for such national reform and regeneration as likely to be effected through the establishment of any number of *opium-refuges* backed up by the absolute prohibition of the Indian drug.

The cure must be sought in the creation of a sound public opinion and the diffusion of secular and religious truth.

It would undoubtedly still be grown at home, in quantities sufficient to meet the demand for it, and the only way of dealing radically with the evil is by

do not look on drunkenness as any shame, but make a jest of it. The Emperor banished him that first invented wine in China, and their histories tell us that he shed many tears condoling the mischiefs that invention would cause in his empire."

endeavouring to create a *sound public opinion* on the subject and by the wide diffusion of secular and religious truth.

Formation of Opium-Abstinence Societies.

The formation of *Anti-Opium Societies* should be everywhere encouraged, and through them a healthy literature might be disseminated, and this great national evil kept continually before the public mind. Through the same agency the children in the public schools might be indoctrinated with a wholesome disgust and horror of opium, as it is proposed to do in our public schools with respect to intoxicants. Already, some such Opium-Abstinence Societies exist, but they are few and insignificant. No more useful service could be rendered to Chinese society by the medical men and missionaries resident in China than that of forming and fostering such Associations. It is generally conceded that the Total Abstinence Societies of Great Britain, in diffusing a sounder opinion as to the use of alcohol, have effected an immense reform in the drinking habits of our countrymen. Those who originated and sustained the Total-Abstinence movement in Great Britain have rendered a memorable service to their country. The glory of achieving for their fellow-countrymen a similar deliverance awaits the apostles of total-abstinence from opium in China. There is no room for despair.

The Tai-Pings Anti-opium smokers.

In the Tai-Ping movement, which at first raised the highest expectations in the bosoms of the friends of China, opium smoking was regarded as a *breach of*

morality—a feature of their policy which, being perfectly disinterested, commended the movement, not less to their fellow-countrymen than to ourselves.

Arguments :—Economical, physical, social and moral, spiritual.

By such societies the prevailing custom might be opposed on *economical* grounds, for no one can deny that it leads to enormous waste of the national wealth· the whole of their tea and silk—the richest products of the empire—being bartered for the “*oreign dirt.*” might be opposed on the grounds of the *physical suffering* entailed on vast masses of the population. With the poorer classes, the struggle for existence, at the best of times, is a stern, hand to hand encounter ; for the head of the family to spend one-third or one-fourth of his small earnings in the costly indulgence of opium smoking, means the utmost privation and distress to his wife and family. It might be opposed on *moral grounds*. Like drunkenness, opium smoking is a debasing, disgusting, and horrible vice and the parent of other vices. It may not be indulged in to any extent without debilitating the moral fibre of the man, without warping the affections and deadening all the loftier activities. It gives an unnatural place and dominion to the body, and a sensual appetite, over all the nobler powers of the intellect, the heart, and the conscience, whereas the body should be the effective servant and comrade of man’s nobler life. It lessen’s the man’s power of serving God and his fellow-men, and imperils his eternal well-being.

A commencement has already been made in the direction indicated. In the capital and elsewhere, books on geography, astronomy, mathematics, alge-

bra, natural philosophy, and medicine are eagerly sought for, as well as religious and scientific translated foreign books. The twenty different scientific works published at the Shanghai arsenal have a ready sale, realizing in Peking alone 50 taels per month. A number of influential persons have been drawn to the shops where these works are sold, and the free interchange of ideas appears to be fast dispelling old prejudices against foreigners. Many inquiries are made for books suitable for teaching English.

A new 60 paged Magazine, profusely illustrated, was started in 1871 at Peking, three-fourths of which is devoted to scientific and literary articles, the remaining one-fourth to the principal news of the various countries of the globe. Each number contains 15,000 characters cut on blocks. The need of such a periodical has long been painfully felt, in breaking down the conceit and arrogance of this people and in dispersing the ignorance and superstition which broods over the land; it must be helpful in preparing a way for the gospel and introducing a new and better order of things.

"Mental agencies, says T. T. Meadows, "can alone put a stop to opium smoking, as drunkenness has been voted out in England. The Chinese will ultimately become convinced of this."

Vulgarise the practice, and it will die out.

"Let it be once stamped as a vulgar and disreputable, as well as a selfish and degrading vice—*vulgarise the practice*, in short—and it will die out."

In confirmation of this view, I have remarked that the higher the social rank of the opium smoker, the more intelligence he possessed, and the more inter-

ests he had in life, the more likely he was to renounce the habit. There are exceptions to this, but it is a fact that *all my reliable cases of renunciation* of the practice were amongst persons of good social position, military officers, mandarins, well-to-do shopkeepers, druggists, &c. It is painful to observe with what unanimity the doctors write as to *the hopelessness* of trying to cure the lowest class of opium smokers. Their life is so full of hardship, moil, and drudgery; it has so few solaces of any kind, moral, intellectual, social; their outlook is so limited, that they seize with avidity upon the one available sensual pleasure open to them. None but a pessimist would deny that European life to-day abounds with sources of instruction, amusement, and delight to which our forefathers were strangers, but *none of these* are available to the mass of Chinamen. The "possibilities" of human nature are unfathomed by him; resources within the man himself, and the enrichment of his being by the garnered thoughts of the sceptred dead of all ages and all nations, "who still rule our spirits from their urns," have yet to be discovered to him. But with the discovery, so surely as human nature is not hopelessly bankrupt, must come the desire "to rise on stepping stones, of their dead selves to higher things."

China in a state of transition.

I believe that China is, at the present hour, in a state of *transition*. No one can think of her vast antiquity; her teeming population, held together for so many ages in the bonds of empire; her time-tested solidarity and loyalty to law and order; the ability, industry, and ingenuity of her people; the perfection of her ancient roads, canals, and bridges,

compared with their present state of dilapidation, without feeling convinced that *a period of national decay* has set in. With all her pride, prejudice, and obstinacy in admitting Western ideas, she is inwardly awe-struck and ill at ease before the dawn of a very different day and order of things which must surely come. And this has introduced a spirit of vacillation, uncertainty, and even dismay, which paralyses the national mind.

She is demoralised.

She is demoralised. Royal edicts are promulgated only to be cancelled or set at nought; bodies of organised rebels march periodically through the length and breadth of the land, and devastate the empire, with which the legitimate authorities seem unable to cope; new thoughts, new ideas, and new means of warfare ferment within the empire, and the shock, the trial of bringing a primitive people, of old-world civilisation, into abrupt, unprepared contact with the advanced, and one might say unscrupulous, customs of modern civilisation, has been simply disastrous for China. *Effeminacy and narcotic indulgence*, such as China has exhibited on the grand scale during the last century, and in still growing proportions, could scarcely have taken place had she been faithful to the spirit of her early traditions. Subjected, as they have been, from time to time, to the sway of hardier and more warlike races than themselves, they have in no long time absorbed their conquerors into the great current of national life, till all distinctions are lost, and the nation, in her turn, has vanquished her victors, and become enriched with new strains of blood poured into her veins from without. But in this later conquest there are no

countervailing benefits, and her worst enemy has been herself alone!

The nomadic tribes of the North American continent perished before the approach of the white man and the fiery accompaniments of European civilisation. We believe there is a different fate in store for the John Bull of the extreme East. He will survive the ordeal, and triumph in the long run. But new measures must be adopted to meet the emergency. The old paths will not do. China can never again be governed in the old way. The days of paternal government are over, and the development of the individual man must be fostered.

Already they are building steamboats and war ships with a view to defence; it is time they began to build railroads to bring the distant parts of their vast empire into communication, so as to facilitate travel, and enable the authorities to suppress rebellion by a speedy concentration of force on a given spot; it is time they began to open up the fountains of national wealth, hitherto sealed—the coal and lime and mineral resources of their mountain chains for the sake of the vast population, whose life is a bare struggle for existence.*

A nation of immemorial antiquity and considerable native capacity, but still only a nation of undeveloped men, with the feeble virtue of mere adolescents.

With all her native capacity—and those who know

* With *James Watt and the steam engine* began the great industrial career of England, during which the wealth and material progress of the country has developed beyond all belief. Referring to the national vice, Watt says: "Nothing is so likely to cure the widespread habit of intemperance as a taste for letters, art and music generally developed."

her best admit it (Dr. Legge *e.g.*)—her natural powers and resources, her vast age and opportunities, China is still but a *nation of undeveloped men*; so that, paradoxical as it may seem, she falls an easy prey to the sins of adolescence and immaturity. Her blind adoration of the literary divinities of distant ages, and the exclusive products of her own genius, will no longer avail her in the race. She has paid dear enough for her divinities in the most stereotyped, unprogressive, materialistic civilisation known upon the earth to-day.

What will raise China?

The paralysing influence of idolatry must be shaken off; the sleep of the ages must be broken. Thus only, we believe, will she be enabled to take her true position and rightful place amongst the great nations of the earth.

England, in relation to the immoral opium traffic with China, unworthy of her traditions.

A nation of immemorial antiquity and considerable native capacity, but still only a nation of undeveloped men, with the feeble virtue of mere adolescents, she has on this account only the stronger claim upon the sympathy and compassionate succour of such a people as the English, more powerful, more advanced than they in point of privilege. "Ye that are strong," says her boasted charter-book, "ought to bear the infirmities of the weak, and not to please yourselves." But should England decide still to continue this nefarious traffic, she shall duly reap as she has sown, since there is a God that judgeth in the earth. Too long in this matter of the opium traffic with China

has she proved herself unworthy of all her divine teaching and past traditions. "The genius of England," in the words of Thomas Carlyle, "no longer soars sunward—world defiant—like an eagle through the storms, 'mewing her mighty youth,' as John Milton saw her do: the genius of England has become much liker a greedy ostrich, mainly intent on provender and a whole skin—deeming cash payment the sole *nexus* between man and man." The latest news from China is to the effect that Ping, the resolute Governor-General of Southern Shensi, has *extirpated* the poppy crop of last year, root and branch, thus showing what *can* be done by the native authorities! But what avails this since the markets overflow with the Indian drug, and the British Government, deaf to the voice of justice, humanity, and mercy, will not lift her little finger that the plague may be stayed!

